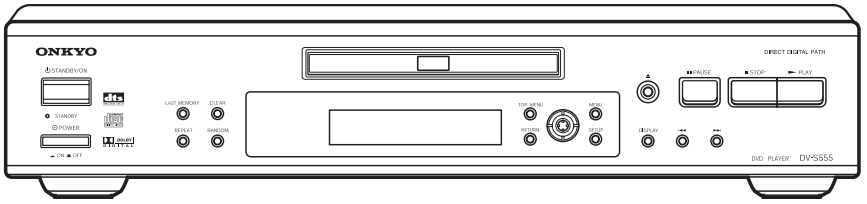
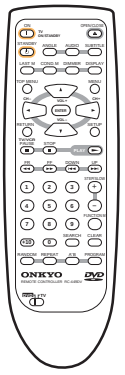
Ref. No.3685
072001

ONKYO® SERVICE MANUAL

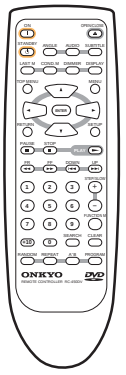
DVD Player

DV-S555





RC-449DV
U.S.A., Canadian models only



RC-450DV
Other models

Black, Silver and Golden models

BMDD	120V AC, 60Hz
BMUP, SMUP	230 -240V AC, 50/60Hz
BMUT, BMUS, GMUT, GMUR	100 - 240V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
IMAGINATIVE SIGHT & SOUND

SPECIFICATIONS

DVD Player

Power supply	North American models:	AC 120 V, 60 Hz
	Other models:	AC 100 - 240 V, 50/60 Hz
Power consumption	North American models:	14 W
	Other models:	15 W
Weight	3.4 kg, 7.1 lbs.	
External dimensions	435 x 91 x 312 mm (W/H/D), 17-1/8" x 3-9/16" x 12-5/16"	
Signal system	PAL/NTSC	
Regional restriction code	North American area:	1
	Some Asian are:	3
	South American area:	4
	Chiness area:	6
Laser	Semiconductor laser , wavelength 650 nm	
Frequency range (digital audio)	DVD linear sound:	48 kHz sampling 4 Hz to 22 kHz
		96 kHz sampling 4 Hz to 44 kHz
	Audio CD:	4 Hz to 20 kHz
Signal-to-noise ratio (digital audio)	More than 100 dB	
Audio dynamic range (digital audio)	More than 96 dB	
Harmonic distortion (digital audio)	Less than 0.05 %	
Wow and flutter	Below measurable level (less than +/- 0.001 % (W.PEAK))	
Operating conditions	Temperature: 5˚ C to 35˚ C (41˚ F to 95˚ F), Operation status: Horizontal	

Outputs

Video output	1.0 V (p-p), 75 ohm, negative sync., pin jack x 1
S-video output	(Y) 1.0 V (p-p), 75 ohm , negative sync., Mini DIN 4-pin x 1 (C) 0.286 V (p-p), 75 ohm
Component video output	(Y) 1.0 V (p-p), 75 ohm , negative sync., pin jack x 1 (P_B)/(P_R) 0.7 V (p-p), 75 ohm <MDD/MUS/MUT/MUR> RGB signal output, 0.7 V (p-p), 75 ohm, SCAR T socket x 1 <MUP>
Audio output (digital output Optical)	Optical connecter x 1
Audio output (digital output Coaxial)	0.5 V (p-p), 75 ohm, pin jack x 1
Audio output (2-Channel Audio)	2.0 V (rms), 320 ohm , pin jack (L, R, MONO) x 1
Audio output (analog audio)	2.0 V (rms), 470 ohm, pin jack (L, R. MONO) x 1

Specifications and features are subject to change without notice.

SERVICE NOTE

PRECAUTIONS

1.Ground for the work-desk.
Place a conductive sheet such as a sheet of copper (with impedance lower than 10Mohm) on the work-desk and place the set on the conductive sheet so that the chassis.
2.Grounding for the test equipments and tools.
Test equipments and toolings should be grounded in order that their ground level is the same the ground of the power source.
3. Grounding for the human body.
Be sure to put on a wrist-strap for grounding whose other end is grounded.
Be particularly careful when the workers wear synthetic fiber clothes, or air is dry.
4. Select a soldering iron that permits no leakage and have the tip of the iron well-grounded.
5. Do not check the laser diode terminals with the probe of a circuit tester or oscilloscope.

1. Replacing the fuses

This symbol located near the fuse indicates that the fuse used is show operating type, For continued protection against fire hazard, replace with same type fuse , For fuse rating, refer to the marking adjust to the symbol.

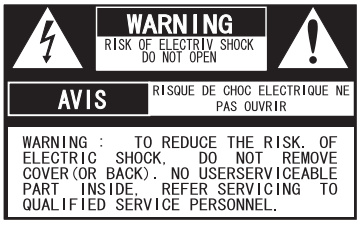
Ce symbole indique que le fusible utilise est e lent. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce demier est indique la qu le present symbol est apposre.

REF.NO.	PART NO.	DESCRIPTION
F1	252152 or ⚠	1.6A-T/UL-ST2 or
	252147 ⚠	1.6A-TSC, Fuse <MDD>
	252273 or ⚠	1.6A-SE-TL250V or
	252077 ⚠	1.6A-SE-EAK Fuse <MUP,MUS,MUT,MUR>

NOTE : <MDD> : 120 V model only
<MUP,MUS,MUT,MUR> : 100 - 240 V model only

2. Safety-check out

(Only U.S.A. model)
After correcting the original service problem perform the following safety check before releasing the set to the customer
Connect the insulating-resistance tester between the plug of power supply cord and terminal GND on the back panel.
Specifications: More than 10M ohm at 500V


WARNING
RISK OF ELECTRIV SHOCK
DO NOT OPEN
AVIS
RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR
WARNING : TO REDUCE THE RISK. OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK). NO USERSERVICEABLE PART INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

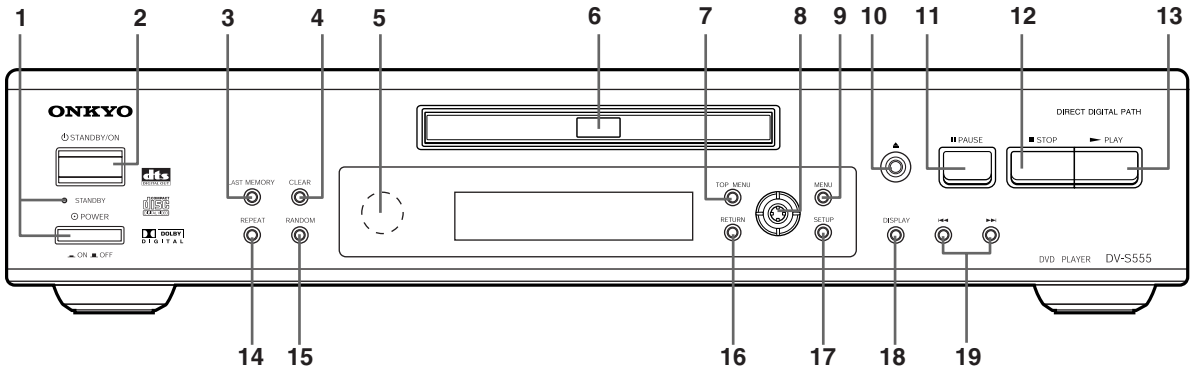
WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

CAUTION : TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION : POUR EVITER LES CHOCS ELECTRIQUE, INTRODUIRE LA LAME LA PLUS LARGE DA LA FICHE DANS LA BORNE CORRESPONDANTE DA LA PRISE ET POUSSER JUSQU' AU FOND.

PANELVIEW

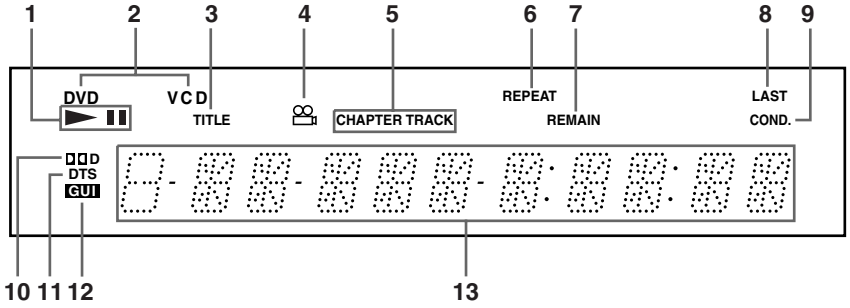
Frontpanel



1. **POWER switch and STANDBY indicator**
   Turns on the main power supply for the DV-S555. The DV-S555 enters standby state and the STANDBY indicator lights up. Pressing the switch again to the off position (OFF) shuts down the main power supply into the DV-S555.
   - Before turning on the power, make sure all cables are properly connected.
   - Turning on the DV-S555 may cause a momentary power surge that might interfere with other electrical equipment on the same circuit. If this is a problem, plug the DV-S555 into a different electrical circuit.
2. **STANDBY/ON button**
   When ST ANDBY/ON button is pressed to ON while the POWER switch is set to ON, the DV-S555 turns on and the STANDBY indicator turns off. Pressing the button again returns the DV-S555 to the standby state. This state turns of f the display , disables control functions.
3. **LAST MEMORY button**
   You can resume DVD or Video CD playback from the point you last watched even if the disc is removed from the player. Press LAST MEMORY during playback to set a Last Memory point. When you want to resume playback of that disc, press LAST MEMORY in the stop mode and playback starts from the memorized point. Last Memory locations can be stored for up to 5 DVDs and 1 V ideo CD.
4. **CLEAR button**
   Works in conjunction with a number of player functions. Use to cancel repeat and random playback, and to edit programs.
5. **Remote control sensor**
   Point the remote control toward the remote sensor to operate the player .
6. **Disc tray**
   When loading a disc, place discs in the disc tray with the label side facing up.
7. **TOP MENU button**
   Press to call up the top menu programmed on the DVD. Depending on the DVD, the top menu may be identical to the DVD menu.
8. **Cursor (◄/►/▲/▼) button/ENTER button**
   Use(◄/►/▲/▼)to move through the options on menu screens and to change settings. Use ENTER to implement settings selected with the cursor buttons or to set items highlighted in a menu.
9. **MENU button**
   Use to display or close the DVD menu or MP3 Navigator screen.
10. **⏏ OPEN/CLOSE button**
    Press to open and close the disc tray.
11. **❚❚ PAUSE button**
    Press during playback to pause. Press again to resume playback.
12. **■ STOP button**
    Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it stopped. Pressing twice causes the disc to return to the beginning of the disc if playback starts again.
13. **► PLAY button**
    Press to start or resume playback.
14. **REPEAT button**
    Use to set the repeat mode.
15. **RANDOM button**
    Press to play chapters/tracks in random order.
16. **RETURN button**
    Use to go one menu back (current settings are maintained). Use RETURN when you do not want to change the option setting in a menu.
17. **SETUP button**
    Press when the player is in either play or stop mode to open and close the Setup screen.
18. **DISPLAY button**
    Press during playback to display statistical disc information. Press repeatedly to display different information.
19. **I◄◄/►►I button**
    Press to go back or advance to previous chapters/tracks. Press and hold to perform fast-reverse/fast-forward playback scanning.

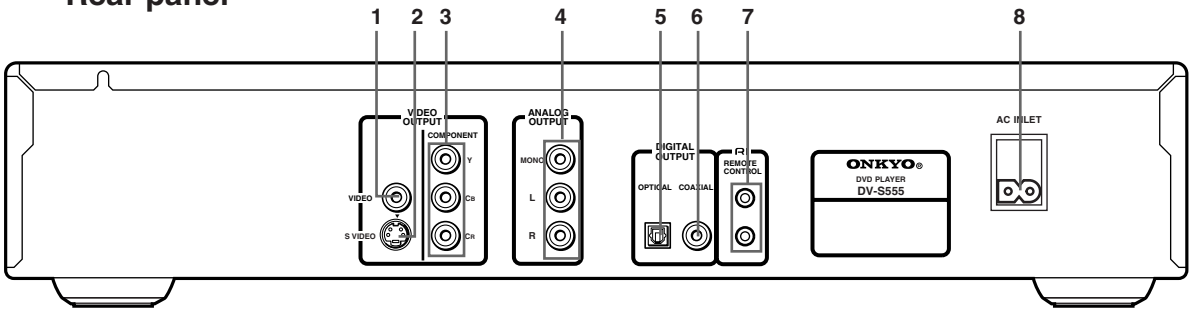
PANEL VIEW

Display



1. ►/❚❚ indicator
2. Inserted disc indicator
3. TITLE indicator
4. Angle icon indicator
5. CHAPTER/TRACK indicator
6. REPEA T indicator
7. REMAIN indicator
8. LAST indicator
9. COND. indicator
10. D D D indicator
11. DTS indicator
12. GUI indicator
13. Multifunctional indicator
    (e.g. operating status and error messages)

Rear panel

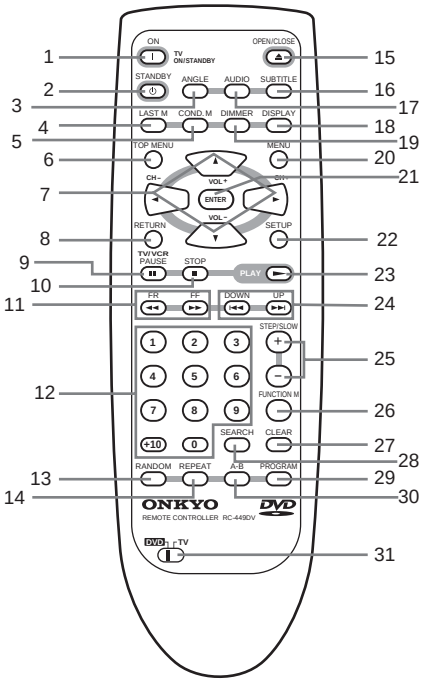


(North American models rear panel shown)

1. **VIDEO OUT VIDEO jack**
   Connect to the video input on a TV or monitor or AV amplifier or receiver with video input capability .
2. **VIDEO OUT S-VIDEO OUT jack**
   If your TV or monitor has an S-video input, clear picture reproduction is possible by connecting the player to your TV or monitor via the S-Video jack.
   You can switch between [S1] and [S2] S-video output from the Setup menu.
3. **VIDEO OUT COMPONENT jacks**
   If your TV or monitor has component video inputs, you can produce a higher quality picture on your TV or monitor by connecting to the component video outputs on this unit.
4. **ANALOG OUTPUT jacks**
   Use to output two-channel audio (analog) to the audio stereo inputs on a TV or stereo amplifier. If you are connecting to a receiver that has both digital and analog input jacks for DVD player connection, it may be beneficial to make both connections.
5. **DIGITAL OUTPUT OPTICAL jack**
   Use to output the digital audio signal recorded on discs. You can output the digital signal via the optical output jack to an AV amplifier or receiver .
6. **DIGITAL OUTPUT COAXIAL jack**
   Use to output the digital audio signal recorded on discs. You can output the digital signal via the coaxial output jack to an AV amplifier or receiver .
7. **RI jack**
   Use to connect this player to another component bearing the RI mark. This lets you control this unit as though it were a component in a system.
8. **AC INLET**
   Use to connect the power cord to the wall outlet.

PANEL VIEW

Remote controller



1 ON button
Press to switch the player on.

2 STANDBY button
Press to put the player in standby.

3 ANGLE button
Some DVDs are recorded with various camera angle playback options. Press ANGLE repeatedly to display different camera angles.

4 LAST MEMORY button
You can resume DVD or Video CD playback from the point you last watched even if the disc is removed from the player. Press LAST MEMORY during playback to set a Last Memory point. When you want to resume playback of that disc, press LAST MEMORY in the stop mode and playback starts from the memorized point. Last Memory locations can be stored for up to 5 DVDs and 1 V ideo CD.

5 COND. M button
You can store in memory the settings for up to 15 DVDs. Press COND. M during DVD playback to memorize the settings.

6 TOP MENU button*
Press to call up the top menu programmed on the DVD. Depending on the DVD, the top menu may be identical to the DVD menu.

7 Cursor buttons (◄ /►/▲/▼)*
VOL +/– buttons (North American models only)
Use to move through the options on menu screens and to change settings.

8 RETURN button*
TV/VCR button (North American models only)
Use to go one menu back (current settings are maintained). Use RETURN when you do not want to change the option setting in a menu.

9 PAUSE ❚❚ button
Press to pause playback of a disc. Press again to resume playback.

10 STOP ■ button
Press to stop playback. Pressing once enables playback to resume from a point shortly before the location where it was stopped. Pressing twice causes the disc to return to the beginning of the disc when playback starts again .

11 FR/FF ◄◄/►► buttons
During playback of DVD and Video CD, press to perform fast forward scanning or to perform fast reverse scanning of DVD and Video CD. When a CD or MP3 is loaded, audio scanning is performed.

12 Number buttons (1-9, 0, +10)*
Use to perform direct title/folder and chapter/track searches, and to input numerical values.

13 RANDOM button
Press to play chapters/tracks in random order.

14 REPEAT button
Use to set the repeat mode.

15 OPEN/CLOSE ≙ button
Press to open or close the disc tray.

16 SUBTITLE button
Press repeatedly to select one of the subtitle languages programmed on a DVD or to turn the subtitles off.

17 AUDIO button
Press repeatedly to select one of the audio languages programmed on a DVD.
For Video CD, CD and MP3, each press changes the audio output as follows.

Stereo → 1L(Left) → 2/R(Right)

18 DISPLAY button
Press during playback to display statistical disc information. Press repeatedly to display different information.

19 DIMMER button
Toggle to control the lightness of the display.

20 MENU button*
Use to display or close the DVD menu or MP3 Navigator screen.

21 ENTER button*
Use to implement settings selected with the cursor buttons or to set items highlighted in a menu.

22 SETUP button*
Press when the player is in either play or stop mode to open and close the Setup screen.

23 PLAY ►
Press to start or resume playback.

24 UP/DOWN ⏮ / ⏭
During playback, press to go back to a previous chapter/track and to advance to the next chapter/track .

25 STEP/SLOW +/- buttons
Press STEP/SLOW + or - during playback to view still frame. Press and hold STEP/SLOW + or - during playback to view slow playback. In still frame, press STEP/SLOW + to advance DVDs and V ideo CDs frame by frame and STEP/SLOW - to back up a few frames at a time (DVD only).

26 FUNCTION M button
You can store in memory up to 5 settings. Press FUNCTION M to memorize and recall the settings.

27 CLEAR button
Works in conjunction with a number of player functions. Use to cancel repeat and random playback, and to edit programs.

28 SEARCH button
Press to perform a title/folder, chapter/track or elapsed time search.

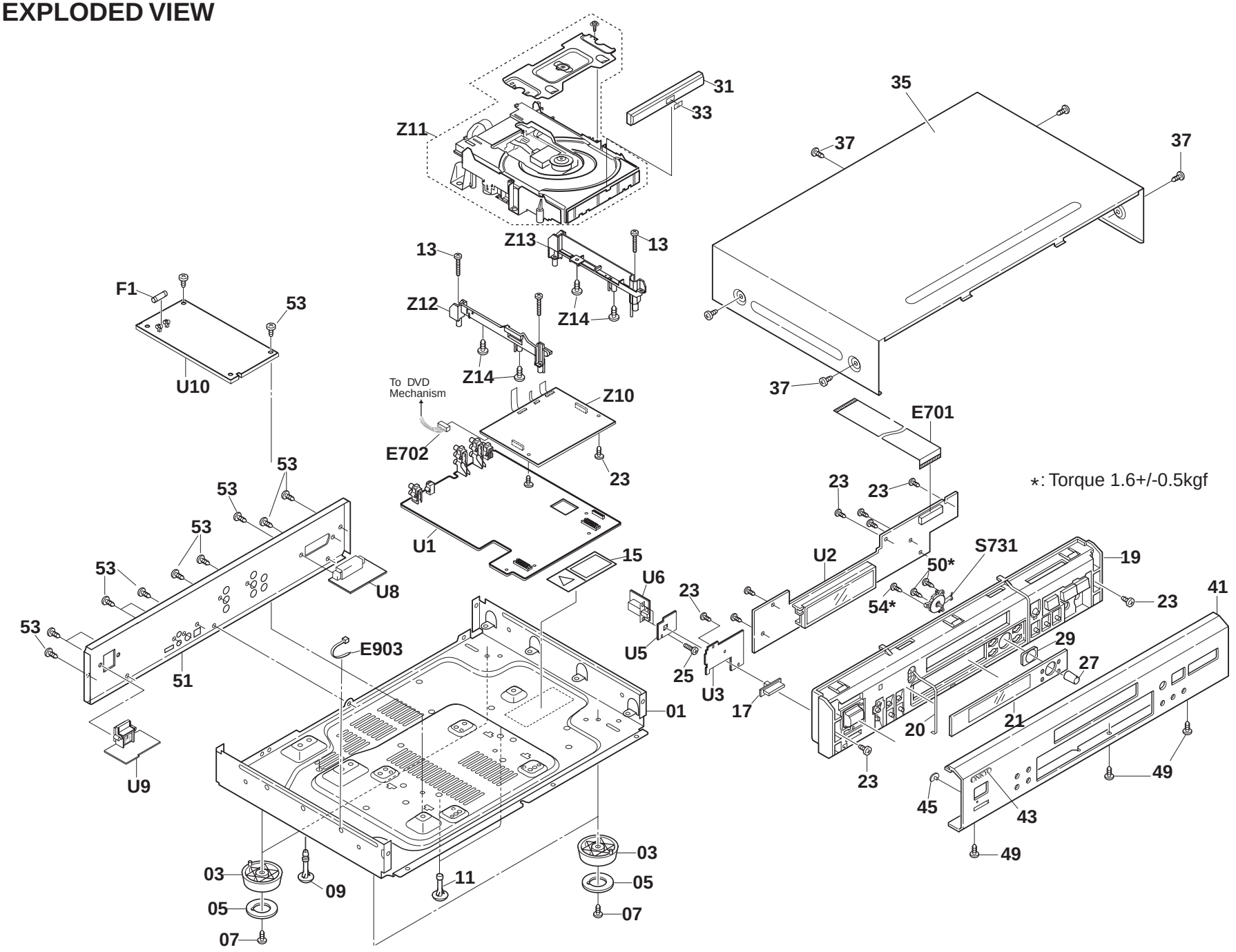
29 PROGRAM button
You can program titles, chapters, or tracks to play back in a desired order . Programs can be a maximum of 24 steps. Additionally, DVD programs for up to 24 discs can be stored in the player's memory for future use.

30 A-B button
Press at the beginning and end of the section you want to repeat or to mark a location you want to return to.

31 DVD/TV switch (North American models only)

(Buttons indicated with * are used for menu operation.)

EXPLODED VIEW



PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	27100399A	Chassis
3	27175316B	Leg
5	28141332	Cushion
7	838130088	3TTB+8B, Self tapping screw
9	27190428A	KGLS-10RF, Holder
11	27191112	KGPS-6RF, Holder
13	838130208	3TTB+20B, Self tapping screw
15	⚠ 29362584	Label (DVD)
16	29363012	Caution label, RISK
17	28325497A	Knob, POWER
19	27111229	Front bracket <B>
	27111230	Front bracket <S>
	27111231	Front bracket <G>
20	29110161	Tape
21	28191926	Clear plate <B>
	28191927	Clear plate <S/ G>
23	838130088	3TTB+8B, Self tapping screw
25	82143010	3P+10FN(BC), Special screw
27	28325933	Knob, CRS <B>
	28325934	Knob, CRS <S>
	28325935	Knob, CRS <G>
29	27268041	Guide, CRS
	27268042	Guide, CRS <S>
	27268043	Guide, CRS <G>
31	28148479	Door <B>
	28148480	Door <S>
	28148481	Door <G>
33	27262651	Plate, DVD <B>
	27262651	Plate, DVD <S>
	27262651	Plate, DVD <G>
35	28184808	Top cover <B>
	28184779A	Top cover <S>
	28184780A	Top cover <G>
37	838430088	3TTB+8B(BC), Self tapping screw
	838930088	3TTB+8B(UN), Self tapping screw <S/G>
41	27212321	Front panel <B>
	27212322	Front panel <S>
	27212323	Front panel <G>
43	28135244	Badge <B>
	28135245	Badge <S/G>
45	28198906	Facet
49	838430088	3TTB+8B(BC), Self tapping screw
50	838126068	2.6TTB+6B(BC), Self tapping screw
51	27122857	Rear panel <MDD>
	27122858	Rear panel <MUP2P>
	27122859	Rear panel <MUT3P>
	27122860	Rear panel <MUS4P>
	27122861	Rear panel <MUR6P>
53	838430088	3TTB+8B(BC), Self tapping screw
54	838426088	2.6TTB+8B(BC), Self tapping screw
E250	2047201512	Flexible flat cable <MUP2P>
E701	2045222012	Flexible flat cable
E702	2009990691UL	NSAS-10P0959, Socket AS
E903	260208	Wire tie
F1	⚠ 252252 or	1.6A-T/UL-ST2 or
	⚠ 252147	1.6A-TSC, Fuse <MDD>
	⚠ 252273 or	1.6A-SE-TL250V or 1.6A-SE-EAK,
	⚠ 252073	Fuse <MUP2P/MUS4P/MUR6P>
S731	25035710	NPS-115-S673, Rotary encoder AS
Z1	24150019	DB-VPB301, Main PC board ass'y
Z11	24801010	DB-VLD301-006, DVD mechanism ass'y
Z12	24840149	DB-VAC301, Adapter (L)
Z13	24840150	DB-VAC302, Adapter (R)
Z14	838130088	3TTB+8B, Self tapping screw

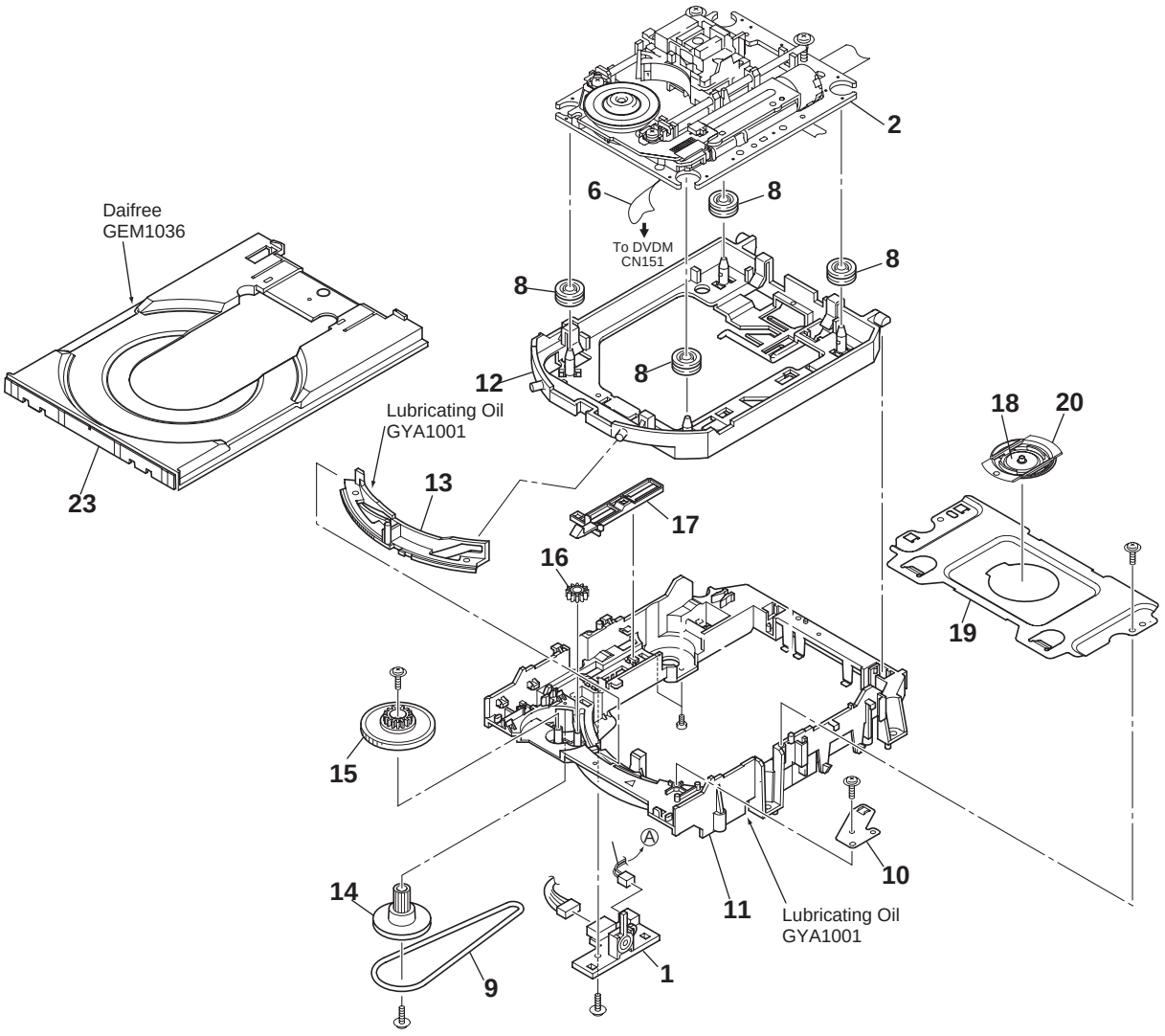
EF. NO.	PART NO.	DESCRIPTION
U1	1H464581A-1A	NAAR-7181A-1A, Output terminal PC board ass'y <MDD>
	1H464581A-1B	NAAR-7181A-1B, Output terminal PC board ass'y <MUP2P>
	1H464581A-1C	NAAR-7181A-1C, Output terminal PC board ass'y <MUT3P>
	1H464581A-1D	NAAR-7181A-1D, Output terminal PC board ass'y <MUS4P>
	1H464581A-1E	NAAR-7181A-1E, Output terminal PC board ass'y <MUR6P>
U2	1H46582A-1A	NADIS-7182A-1A, Display circuit PC board ass'y <MDD>
	1H46582A-1B	NADIS-7182A-1B, Display circuit PC board ass'y <MUP2P>
	1H46582A-1C	NADIS-7182A-1C, Display circuit PC board ass'y <MUT3P>
	1H46582A-1D	NADIS-7182A-1D, Display circuit PC board ass'y <MUS4P>
	1H46582A-1E	NADIS-7182A-1E, Display circuit PC board ass'y <MUR6P>
U3	1H46583A-1A	NADIS-7183A-1A, Standby LED PC board ass'y <MDD>
	1H46583A-1B	NADIS-7183A-1B, Standby LED PC board ass'y <MUP2P>
	1H46583A-1C	NADIS-7183A-1C, Standby LED PC board ass'y <MUT3P>
	1H46583A-1D	NADIS-7183A-1D, Standby LED PC board ass'y <MUS4P>
	1H46583A-1E	NADIS-7183A-1E, Standby LED PC board ass'y <MUR6P>
U5	1H46585A-1A	NAETC-7185A-1A, Support PC board <MDD>
	1H46585A-1B	NAETC-7185A-1B, Support PC board <MUP2P>
	1H46585A-1C	NAETC-7185A-1C, Support PC board <MUT3P>
	1H46585A-1D	NAETC-7185A-1D, Support PC board <MUS4P>
	1H46585A-1E	NAETC-7185A-1E, Support PC board <MUR6P>
U6	1H46586A-1A	NASW-7186A-1A, Power switch PC board ass'y <MDD>
	1H46586A-1B	NASW-7186A-1B, Power switch PC board ass'y <MUP2P>
	1H46586A-1C	NASW-7186A-1C, Power switch PC board ass'y <MUT3P>
	1H46586A-1D	NASW-7186A-1D, Power switch PC board ass'y <MUS4P>
	1H46586A-1E	NASW-7186A-1E, Power switch PC board ass'y <MUR6P>
U8	1H46587A-1B	NAETC-7187A-1B, SCART terminal PC board ass'y <MUP2P>
U9	1H46512A-1A	NAPS-7212A-1A, AC inlet terminal PC board <MDD>
	1H46512A-1B	NAPS-7212A-1B, AC inlet terminal PC board <MUP2P>
	1H46512A-1C	NAPS-7212A-1C, AC inlet terminal PC board <MUT3P>
	1H46512A-1D	NAPS-7212A-1D, AC inlet terminal PC board <MUS4P>
	1H46512A-1E	NAPS-7212A-1E, AC inlet terminal PC board <MUR6P>
U10	24150020	NGPS-0020, Power supply PC board ass'y <MDD>
	24150021	NGPS-0021, Power supply PC board ass'y <UP2P/UT3P/US4P/UR6P>
101	29362993	⚠ Fuse label, 1.6A/125V Power supply unit <MDD,MJJ>
	29361769	⚠ Fuse label, T1.6AL250V Power supply unit <MUP,MUT,MUS,MUR>

<MD> : North American area (Regional restriction code- 1)
<MUP>: European area (Regional restriction code- 2)
<MUT>: Some Asian area (Regional restriction code- 3)
<MUS>: South American area (Regional restriction code- 4)
<MUR>: Chinese area (Regional restriction code- 6)

<B>: Black color model
<G>: Golden color model
<S>: Silver color model

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

EXPLODED VIEW (LOADING MECHANISM)

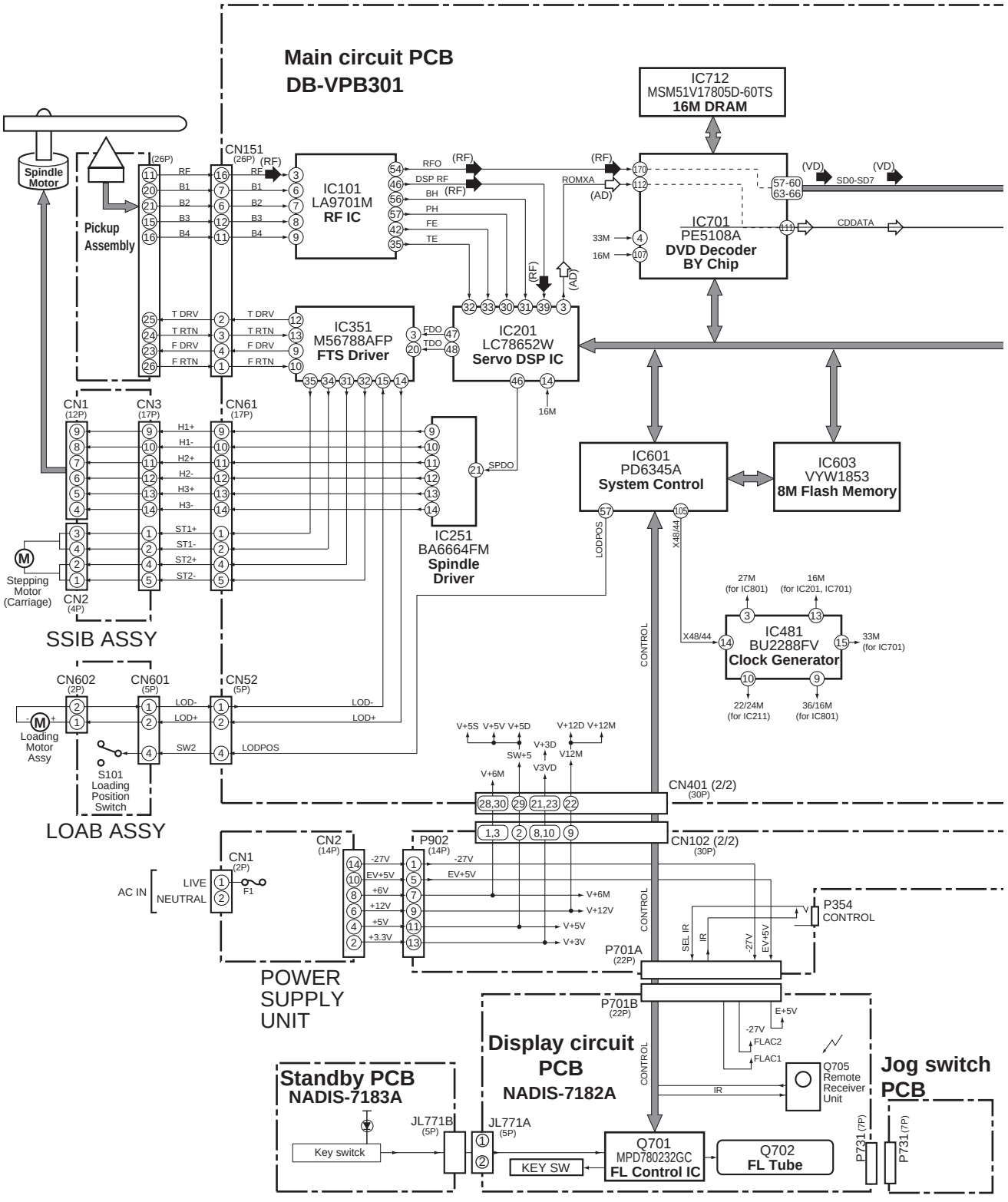


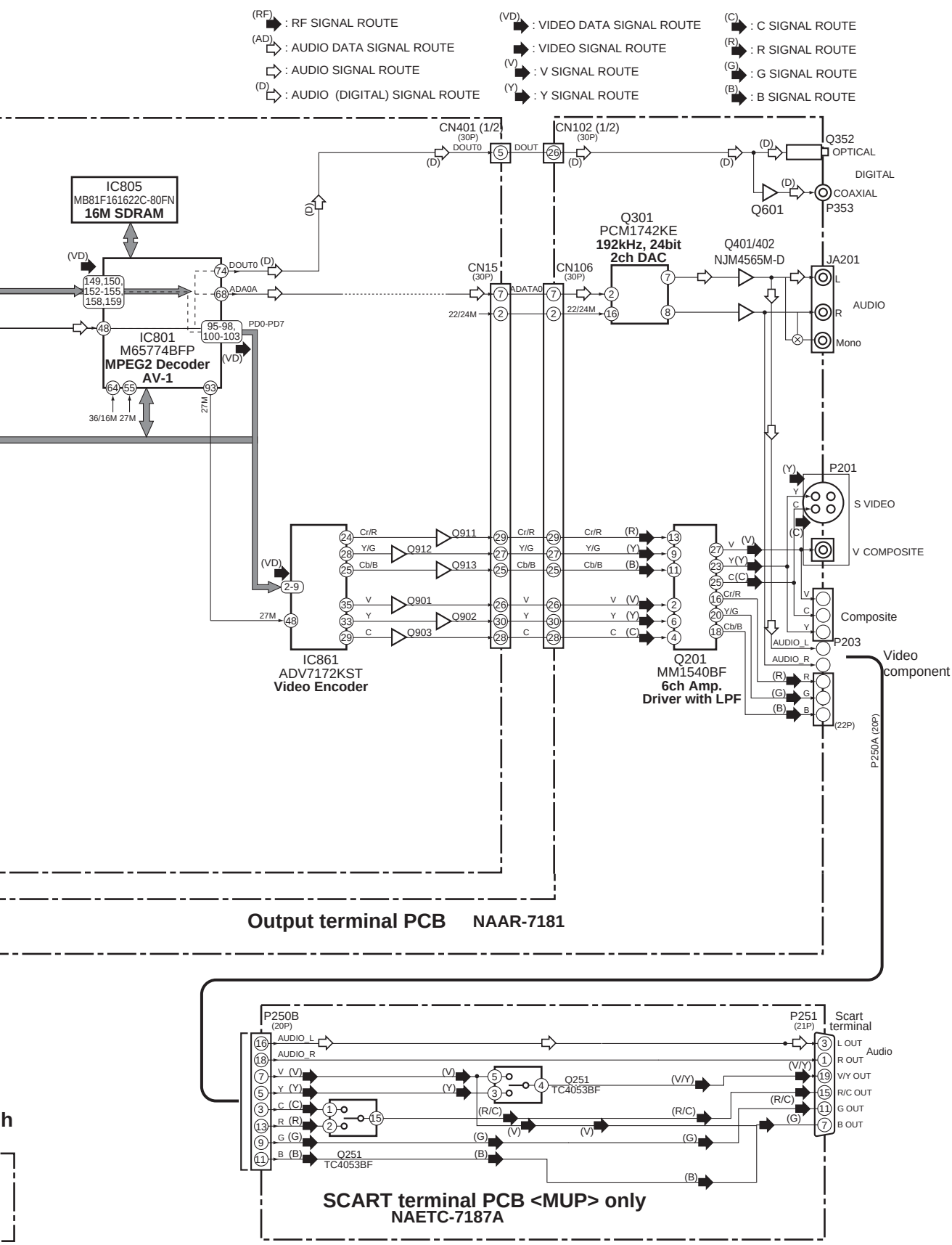
LOADING MECHANISM ASSY PARTS LIST

REF.NO	PART NO.	DESCRIPTION
1	VNP1836	Loading PC board assy
2	VXX2782	Traverse mechanism assy-S
6	VDA1864	Flexible cable 26P
8	VEB1327	Float rubber
9	VEB1328	Belt
10	VNE2253	Stabilizer
11	VNL1917	Loading base
12	VNL1918	Float base DVD
13	VNL1919	Drive cam
14	VNL1921	Gear pulley
15	VNL1922	Loading gear
16	VNL1923	Drive gear
17	VNL1925	SW lever
18	VNE2251	Clamper plate
19	VNE2252	Bridge
20	VNL1924	Clamper
23	VNL1920	Tray

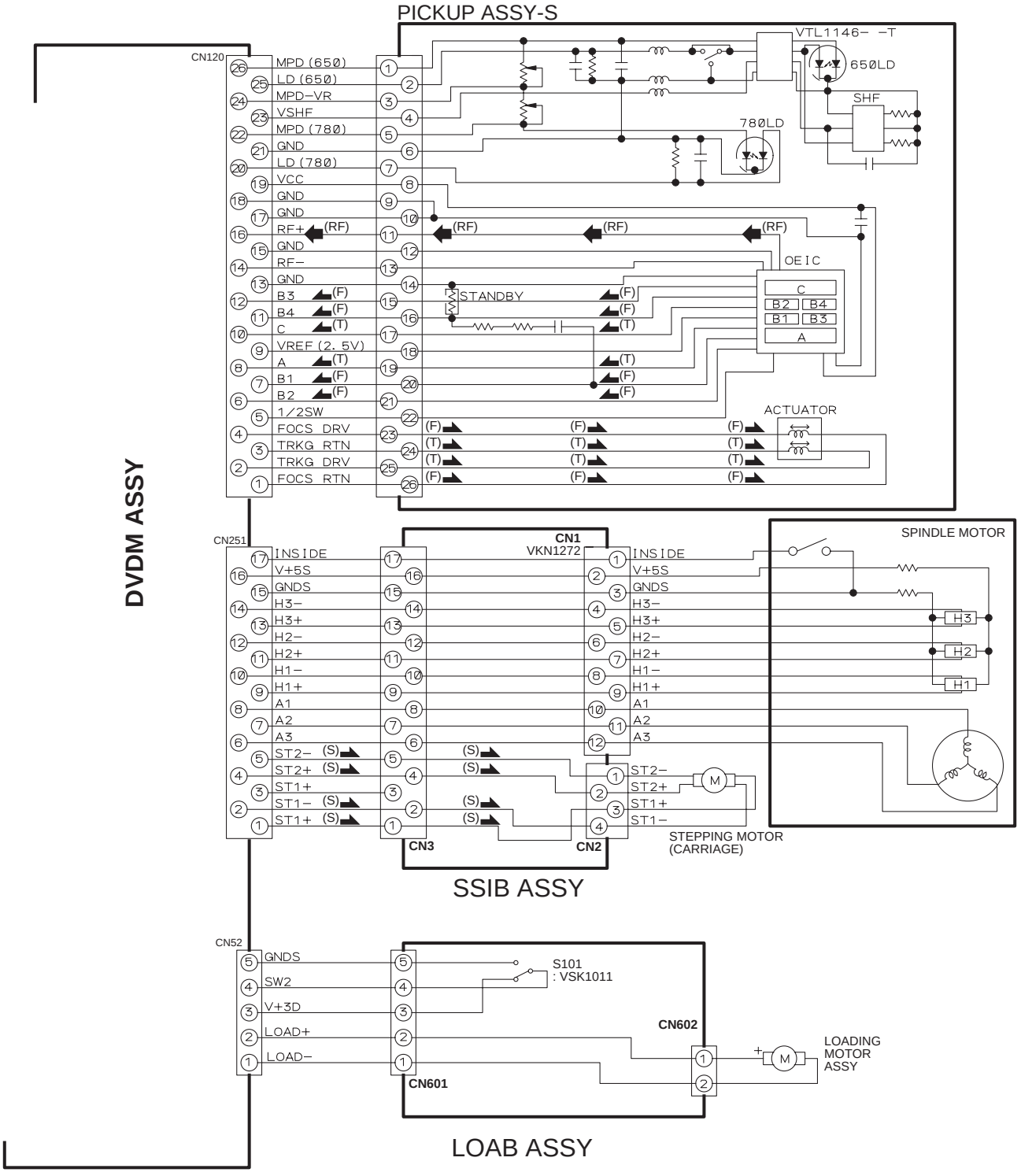
BLOCK DIAGRAM

Overall



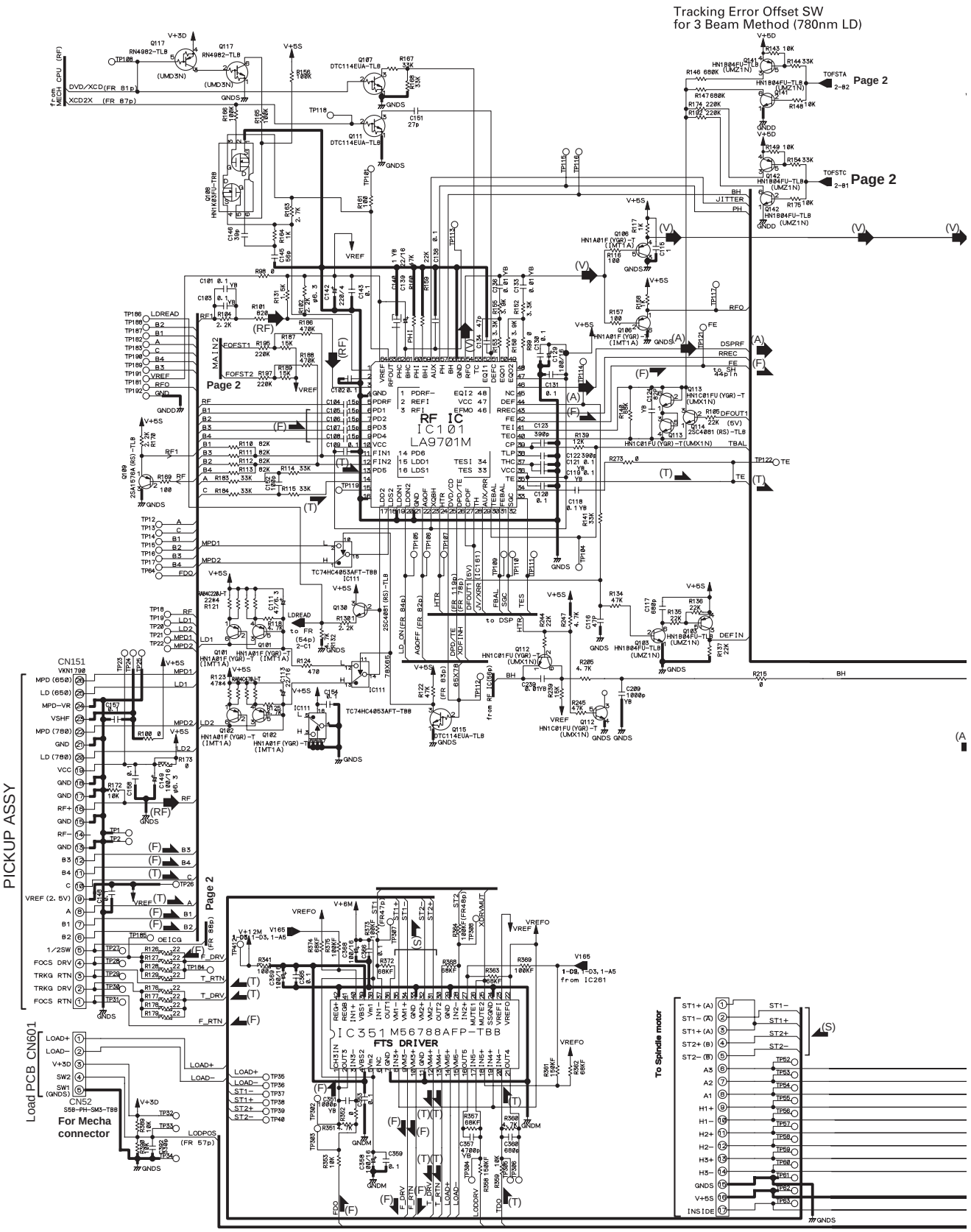

(RF) : RF SIGNAL ROUTE
(AD) : AUDIO DATA SIGNAL ROUTE
: AUDIO SIGNAL ROUTE
(D) : AUDIO (DIGITAL) SIGNAL ROUTE
(VD) : VIDEO DATA SIGNAL ROUTE
: VIDEO SIGNAL ROUTE
(V) : V SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(R) : R SIGNAL ROUTE
(G) : G SIGNAL ROUTE
(B) : B SIGNAL ROUTE
IC805
MB81F161622C-80FN
16M SDRAM
IC801
M65774BFP
MPEG2 Decoder
AV-1
CN401 (1/2)
CN102 (1/2)
CN15
CN106
Q301
PCM1742KE
192kHz, 24bit
2ch DAC
Q401/402
NJM4565M-D
Q352
OPTICAL
DIGITAL
COAXIAL
Q601
P353
JA201
AUDIO
Mono
P201
S VIDEO
V COMPOSITE
Composite
P203
Video component
IC861
ADV7172KST
Video Encoder
Q201
MM1540BF
6ch Amp.
Driver with LPF
Output terminal PCB NAAR-7181
P250B
P251
Scart terminal
Q251
TC4053BF
SCART terminal PCB <MUP> only
NAETC-7187A

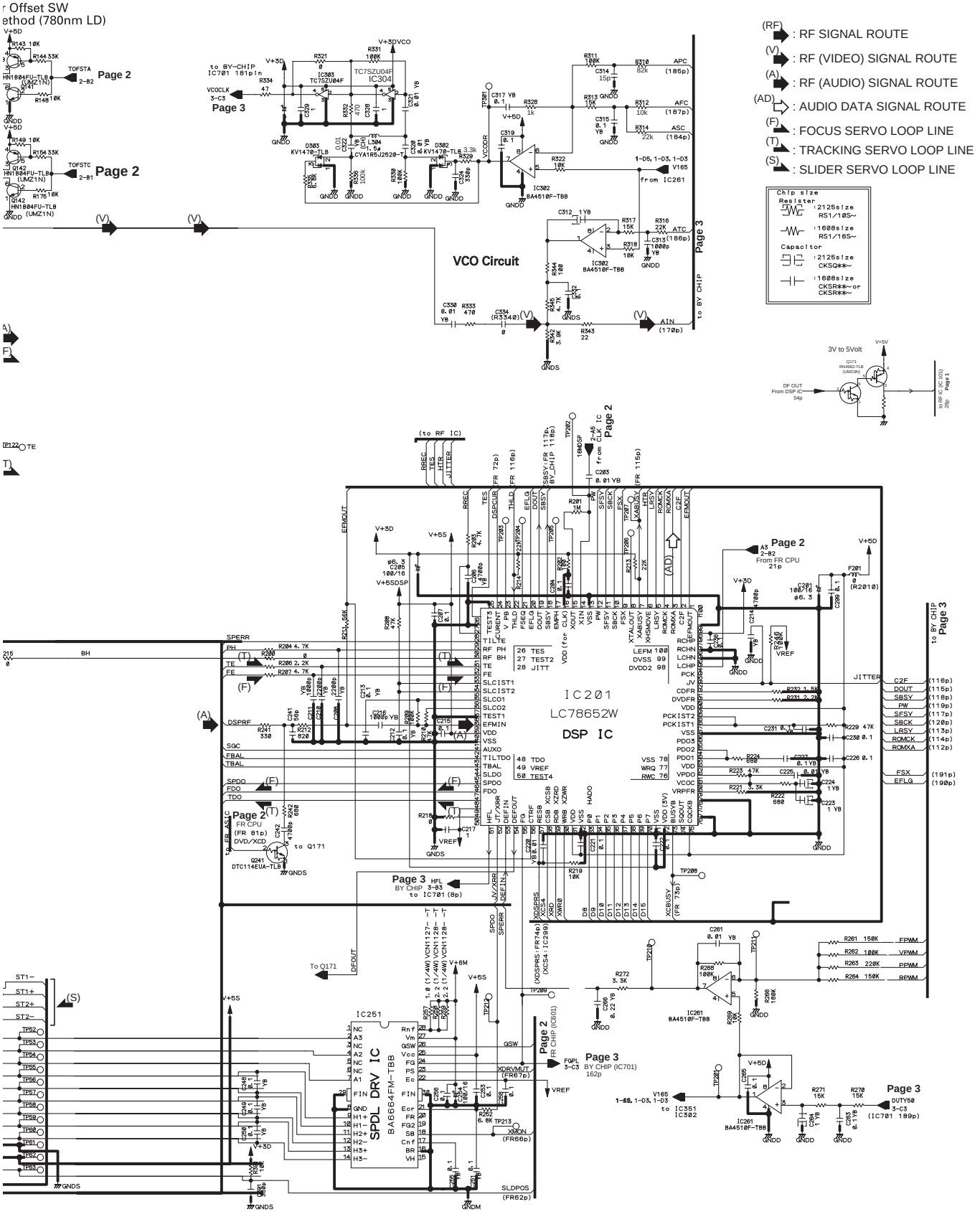
BLOCK DIAGRAM
Mechanism section



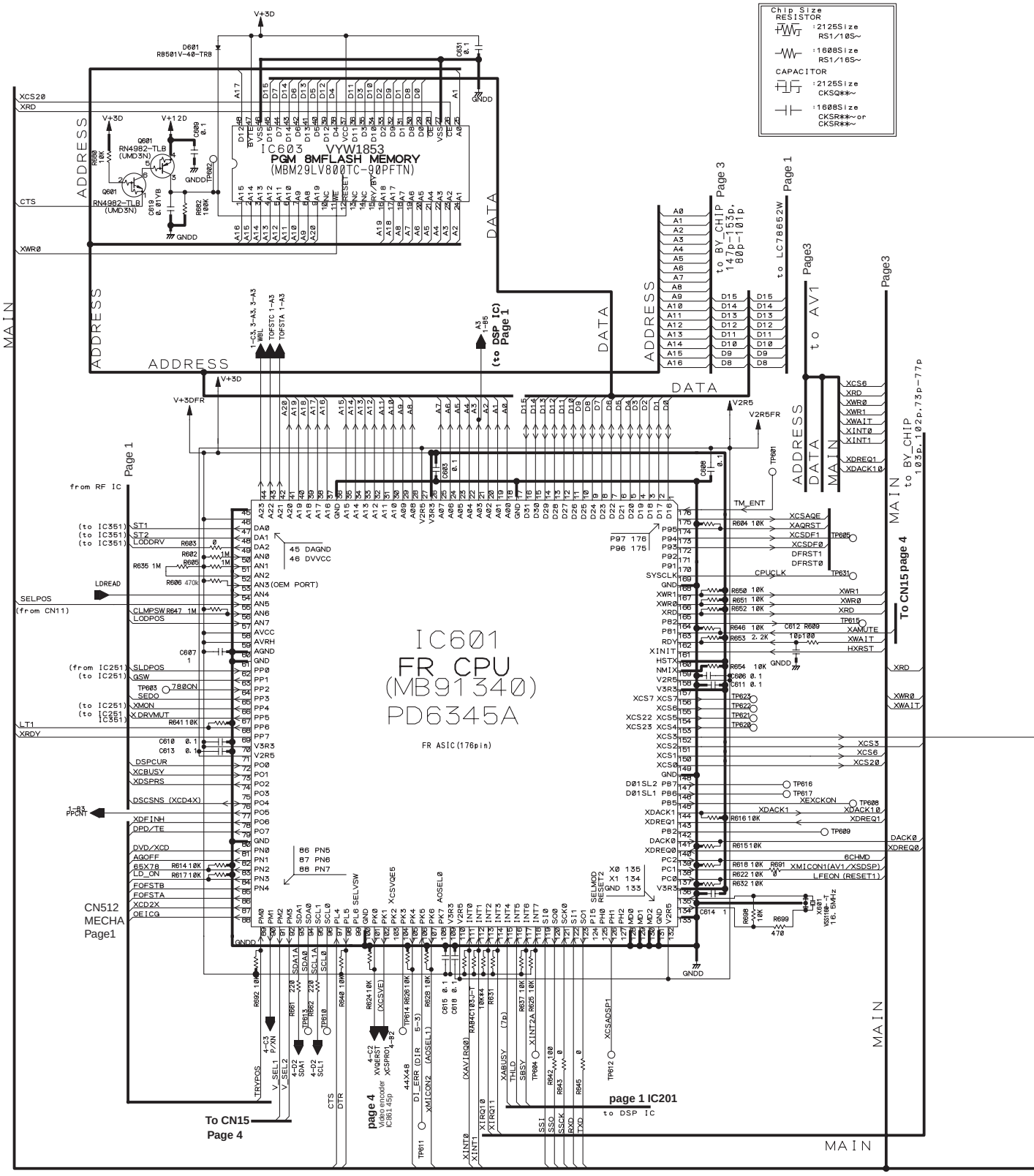
SCHEMATIC DIAGRAM (Page 1)

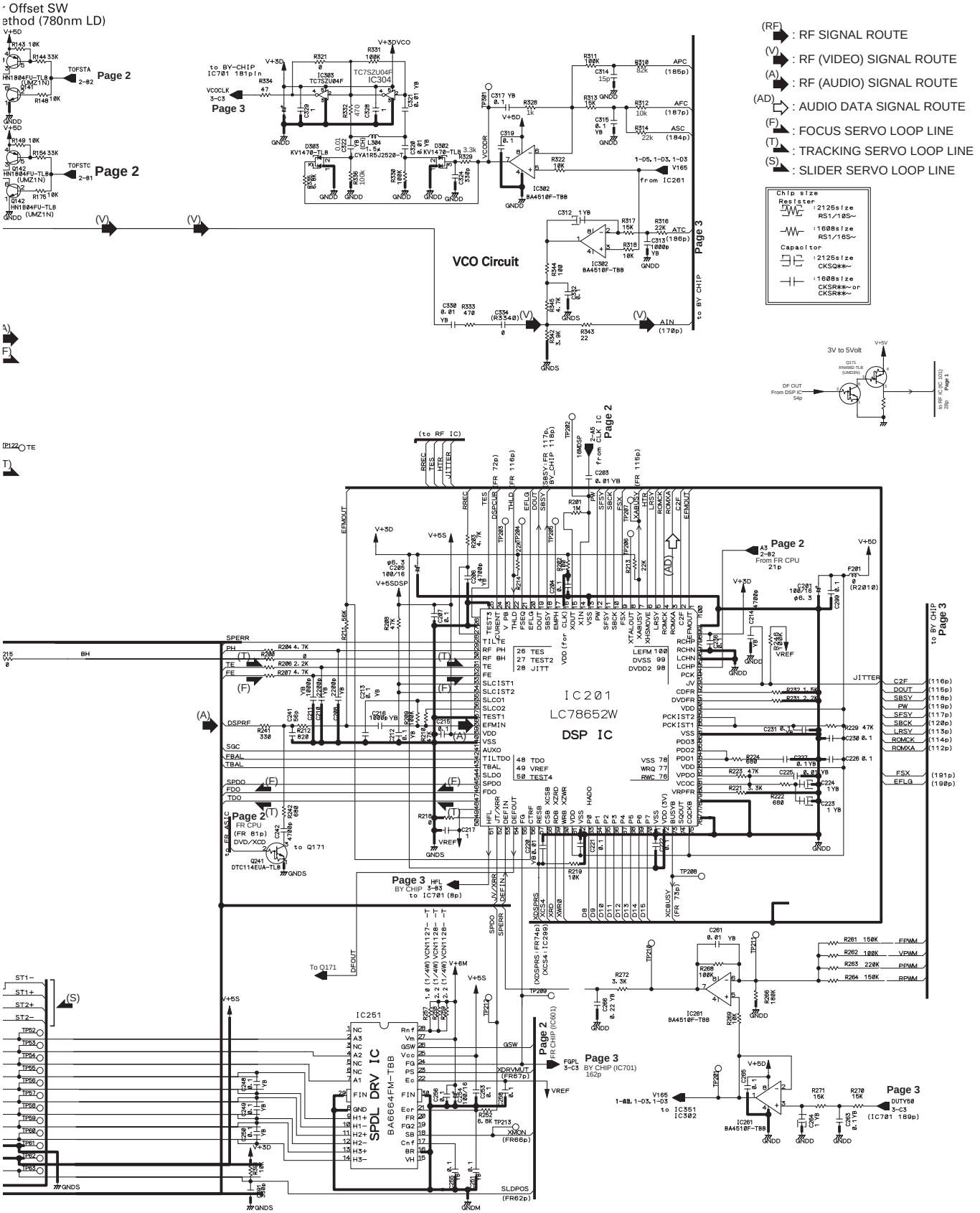
Main circuit PC board



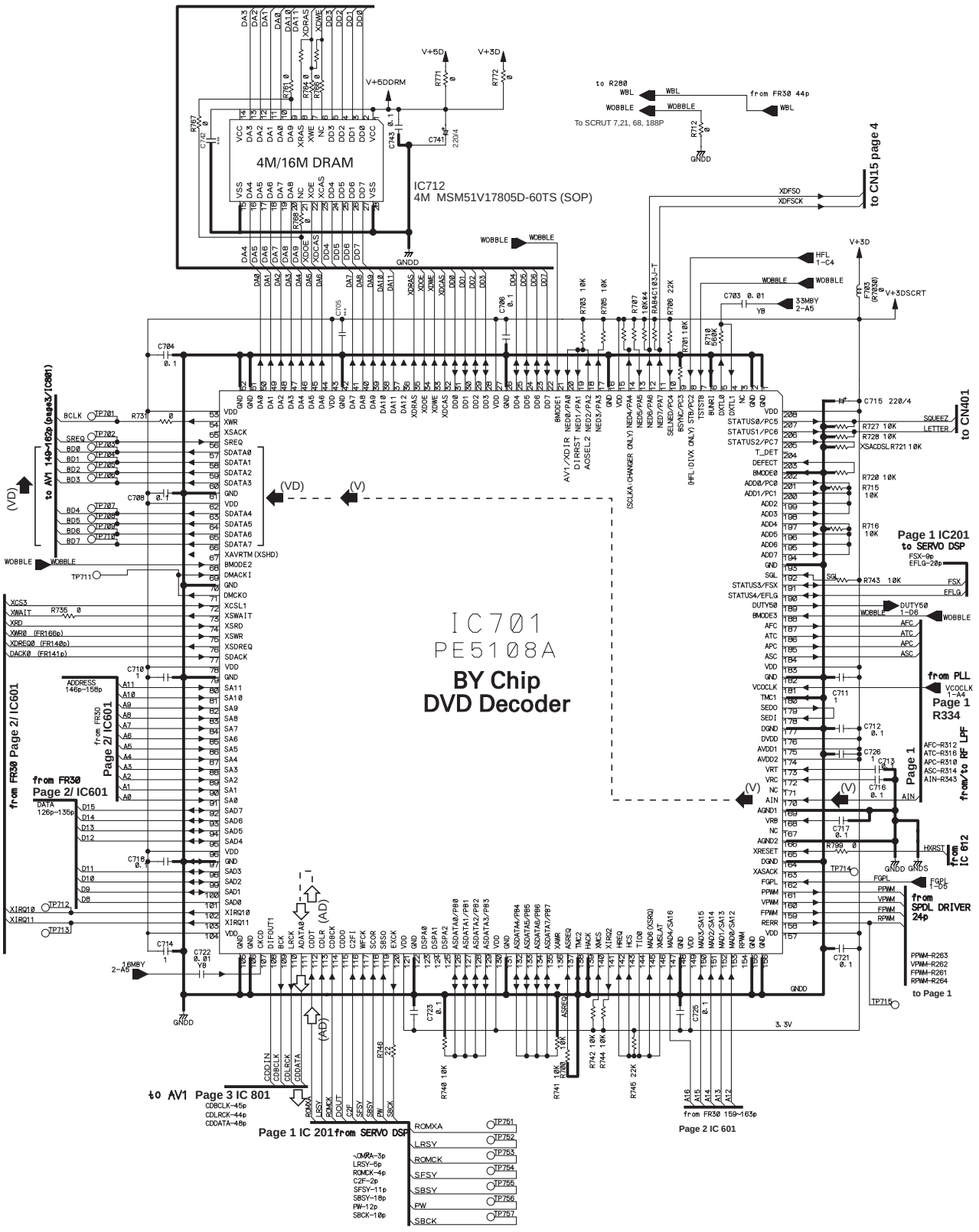

r Offset SW
ethod (780nm LD)
(RF) : RF SIGNAL ROUTE
(V) : RF (VIDEO) SIGNAL ROUTE
(A) : RF (AUDIO) SIGNAL ROUTE
(AD) : AUDIO DATA SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : SLIDER SERVO LOOP LINE
VCO Circuit
IC201
LC78652W
DSP IC
IC251
BA6664FM-TBB
SPDL DRV IC
IC261
BA4510F-TBB
3V to 5Volt
Page 2
Page 3
to BY CHIP
from IC261
from FR CPU
to Q171
to IC351
IC302

SCHEMATIC DIAGRAM (Page 2)

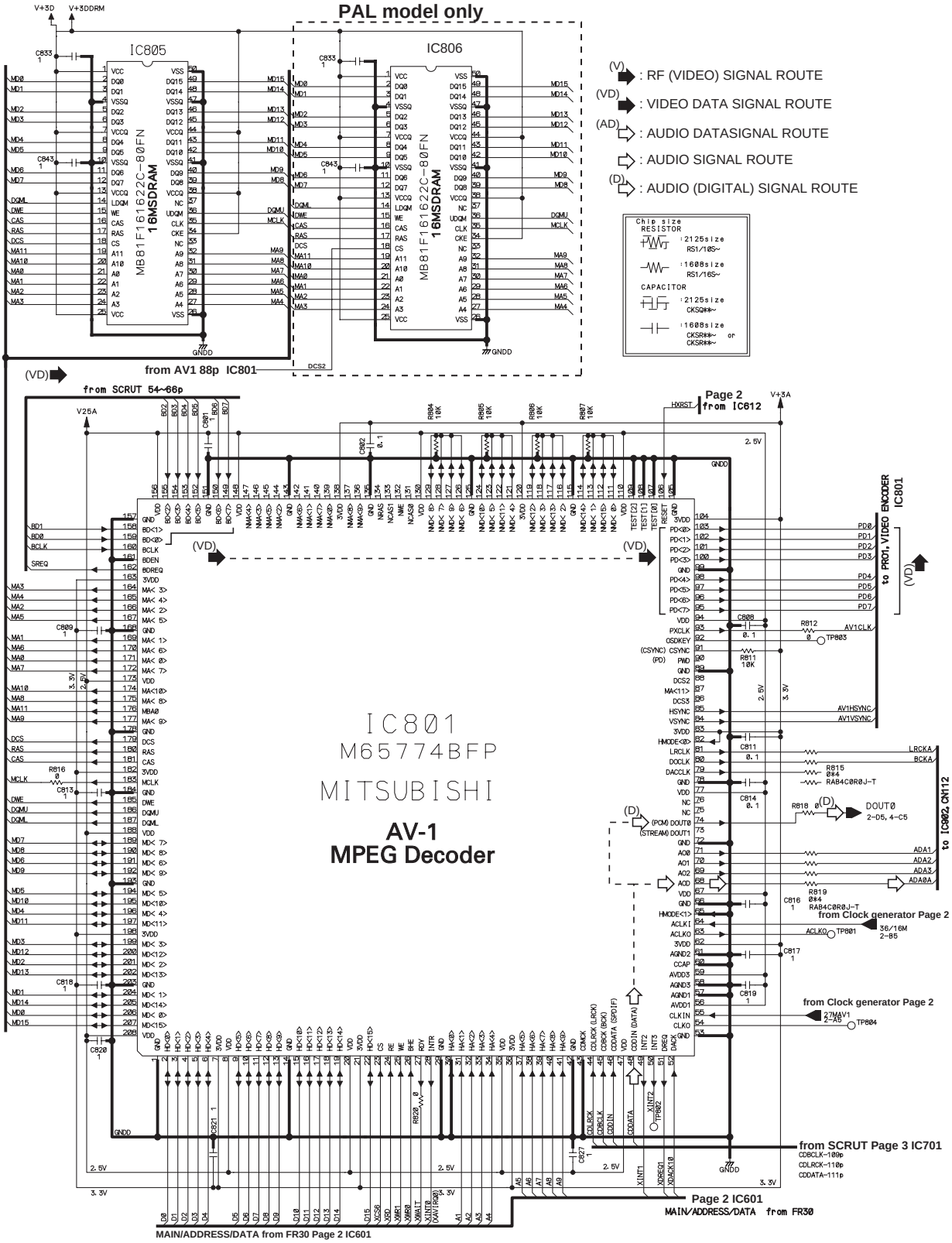



(RF) : RF SIGNAL ROUTE
(V) : RF (VIDEO) SIGNAL ROUTE
(A) : RF (AUDIO) SIGNAL ROUTE
(AD) : AUDIO DATA SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : SLIDER SERVO LOOP LINE
VCO Circuit
IC201
LC78652W
DSP IC
SPDL DRV IC
BA6664FM-TBB
IC251
IC304
TC7SZU04F
3V to 5Volt
Page 2
Page 3

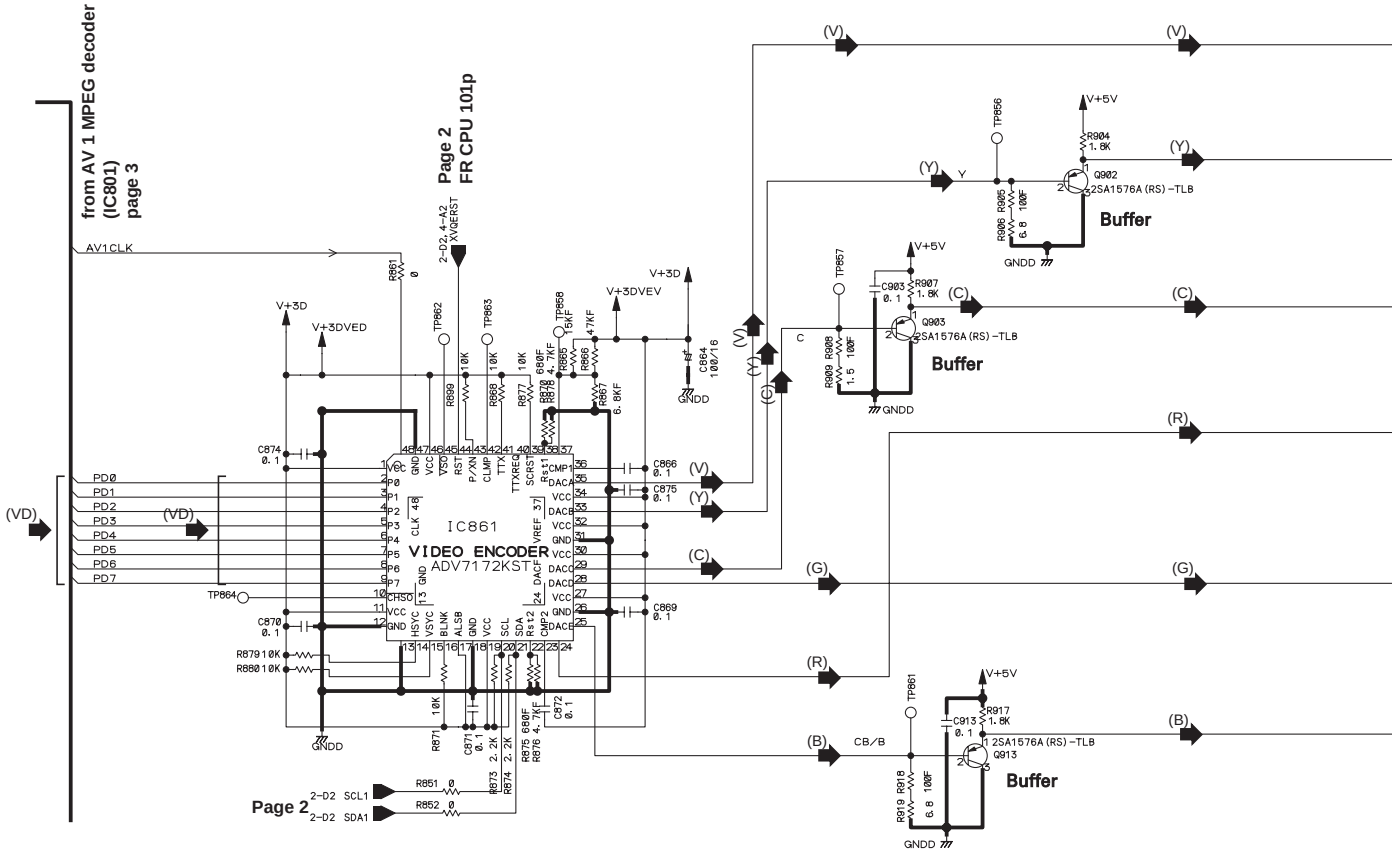
SCHEMATIC DIAGRAM (Page 3)



SCHEMATIC DIAGRAM (Page 3)

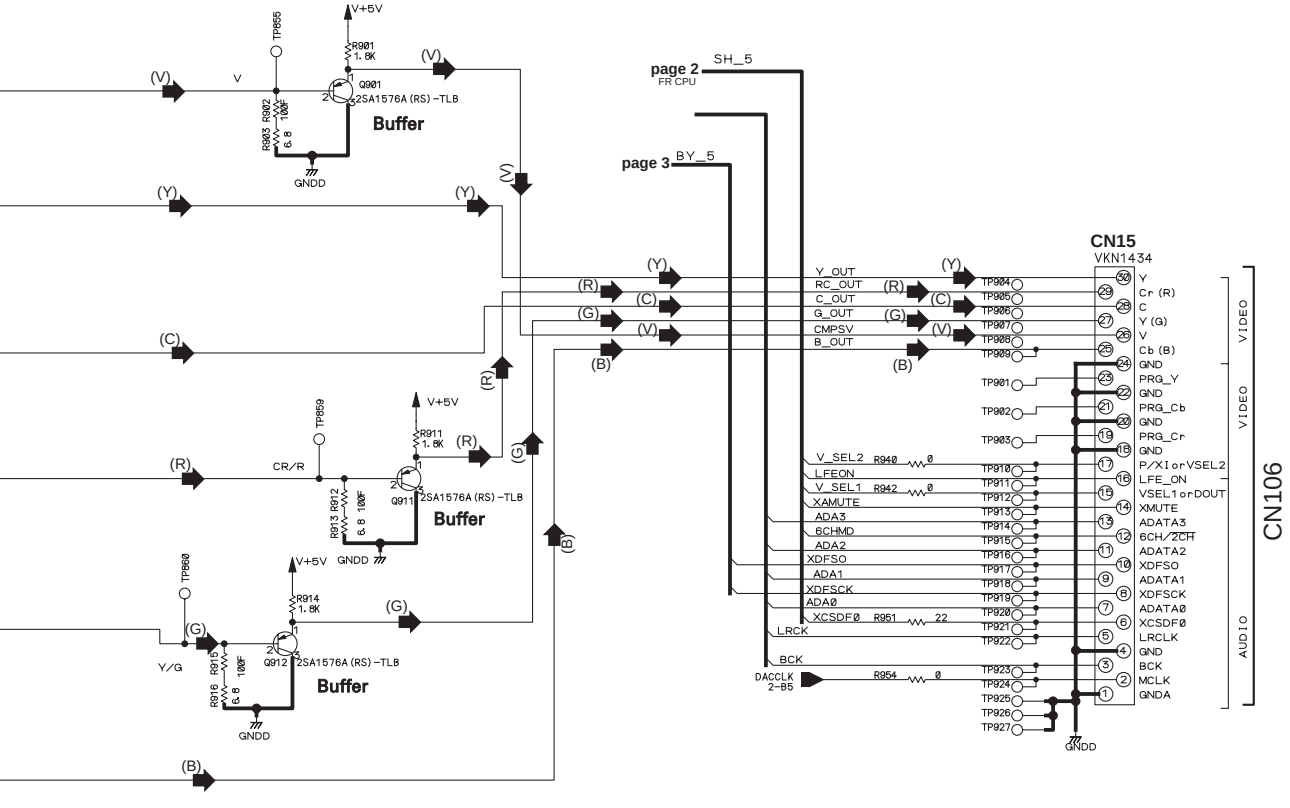


SCHEMATIC DIAGRAM (Page 4)



(VD) : VIDEO DATASIGNAL ROUTE
(V) : V SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(R) : R SIGNAL ROUTE
(G) : G SIGNAL ROUTE
(B) : B SIGNAL ROUTE
: AUDIO SIGNAL ROUTE

CHIP SIZE
RESISTOR
: 2125size RS1/10S~
: 1608size RS1/16S~
CAPACITOR
: 2125size CKSQ**~
: 1608size CCSR**~or CKSR**~



DV-S555

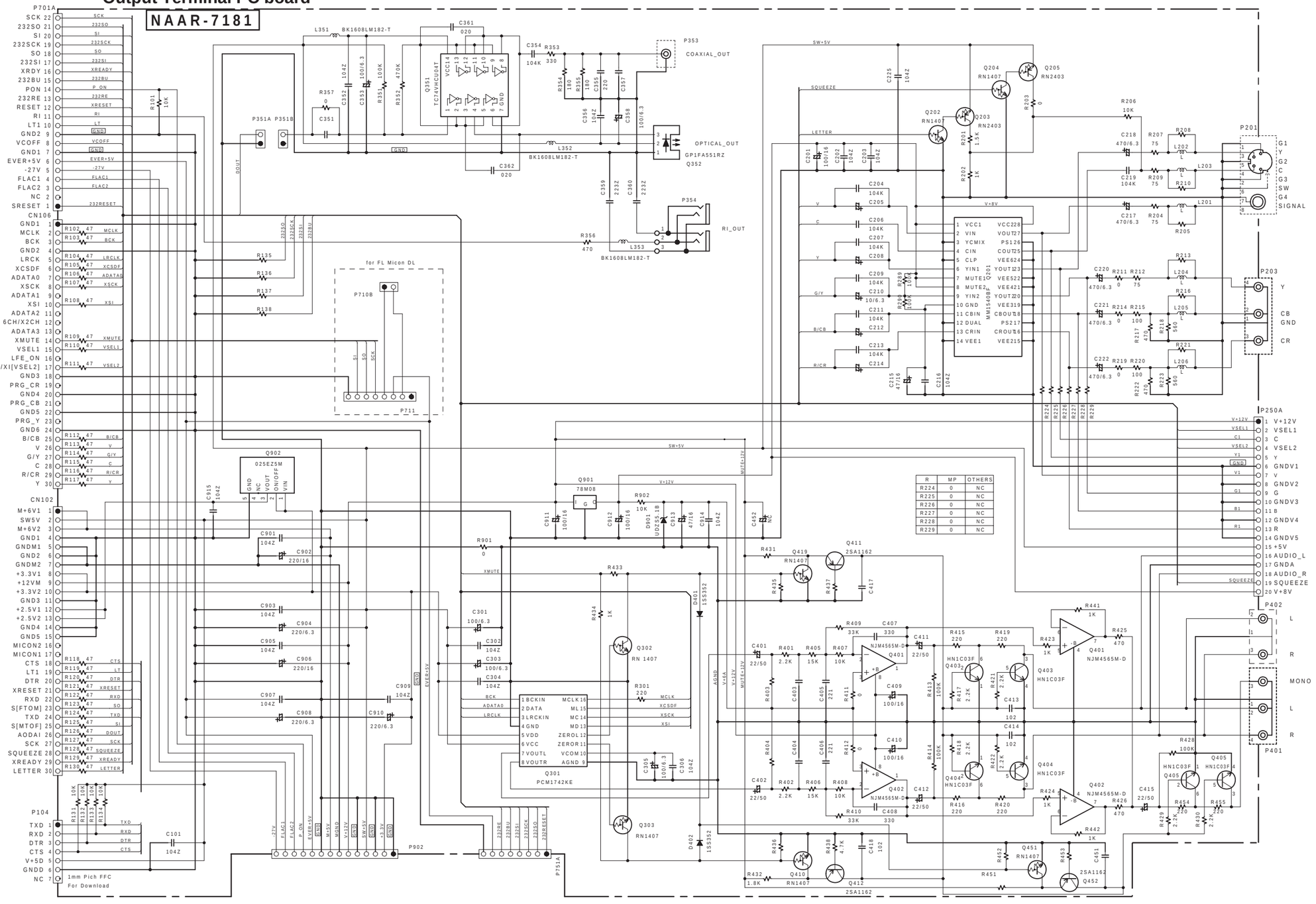
A B C D E F G H

1 2 3 4 5

SCHEMATIC DIAGRAMS

Output Terminal PC board

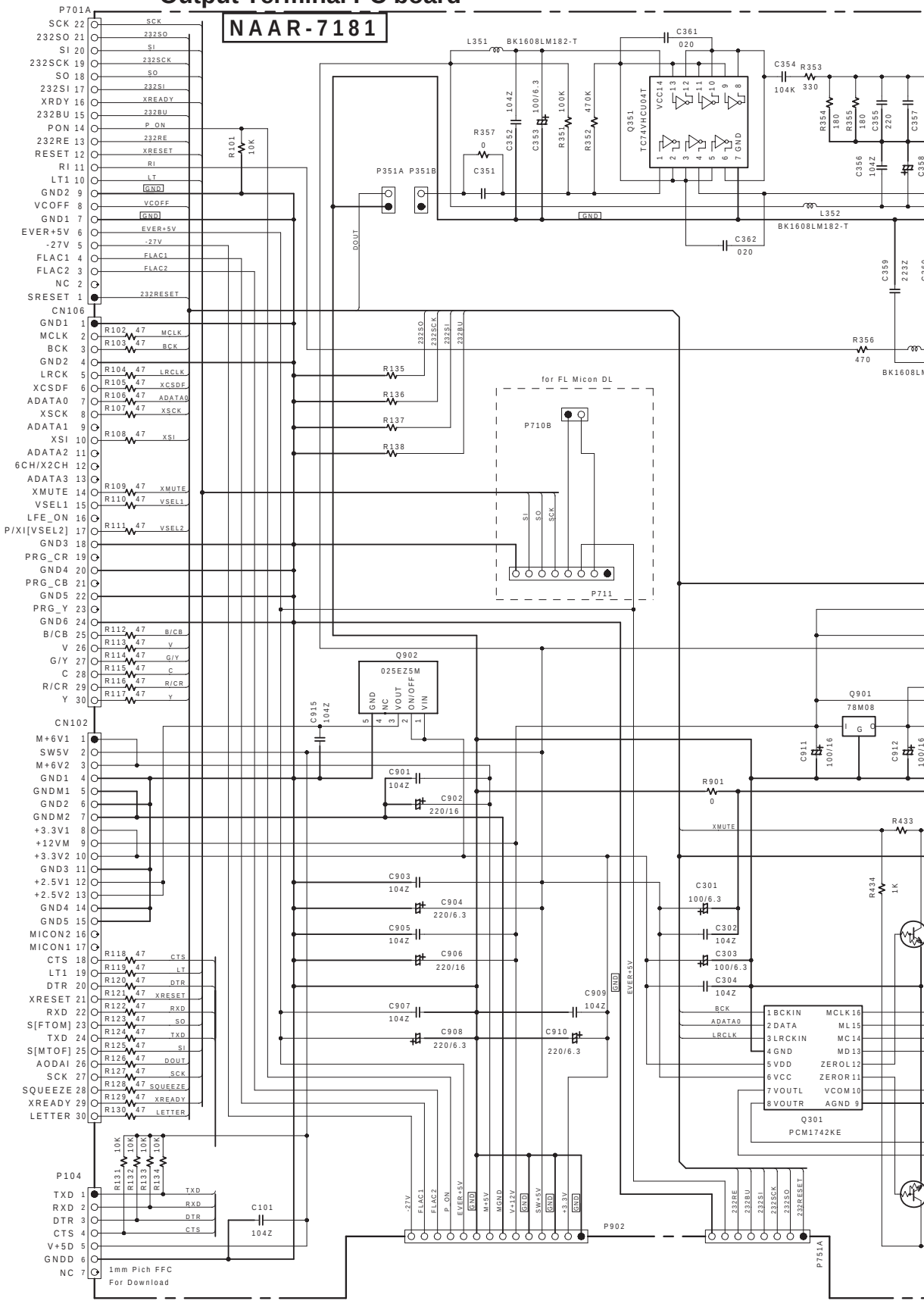
NAAR-7181



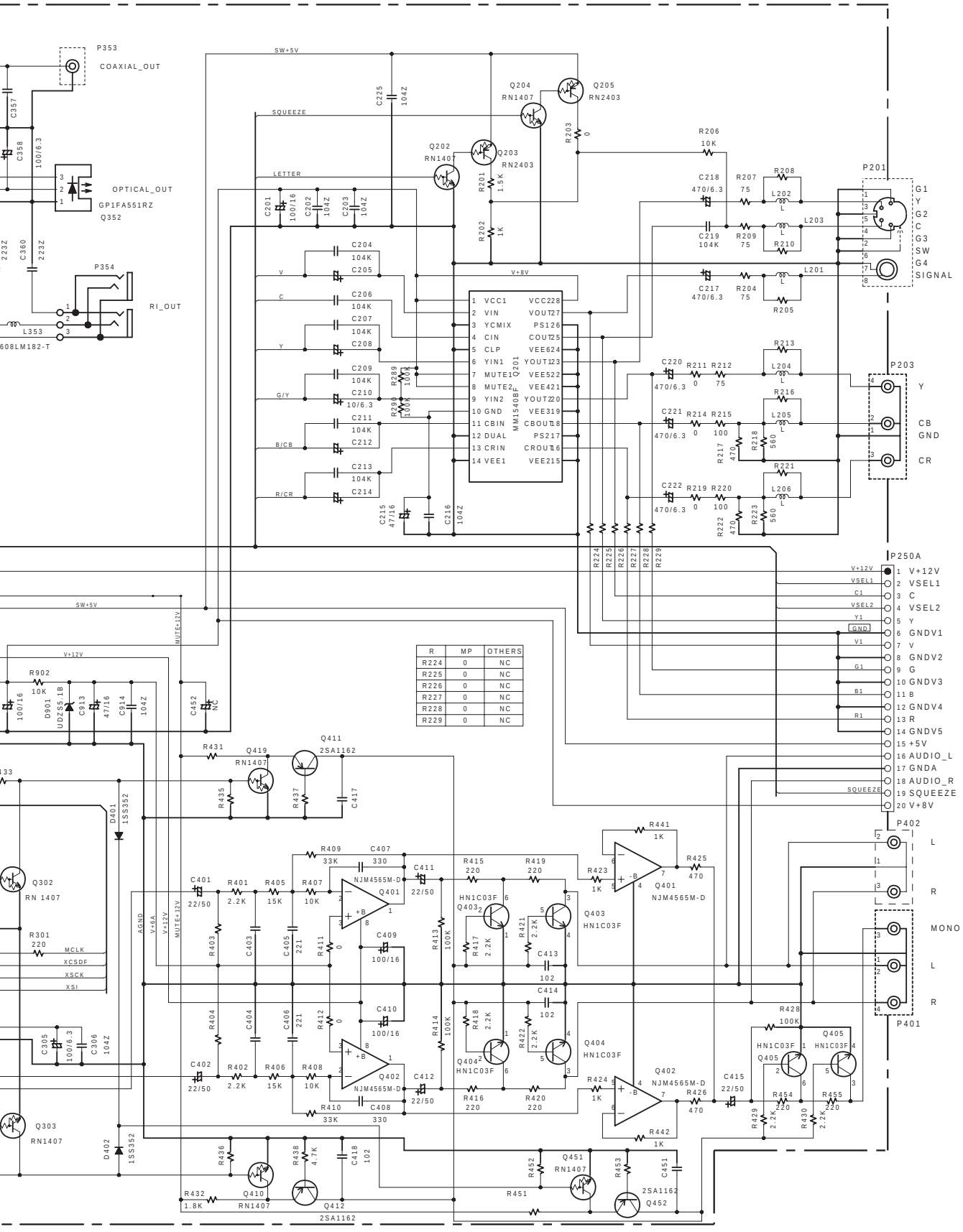
SCHEMATIC DIAGRAMS

Output Terminal PC board

NAAR-7181



E F G H



R	MP	OTHERS
R224	0	NC
R225	0	NC
R226	0	NC
R227	0	NC
R228	0	NC
R229	0	NC

DV-S555

SCHEMATIC DIAGRAMS

Display circuit PC board

NADIS-7182A

Destination	R720	R721
MJJ2N	0	-
MDD1N	10K	56K
MUP2P	8.2K	5.6K
MUT3P	33K	5.6K
MUS4P	27K	68K
MUR6P	33K	5.6K

Q701
MPD780232GC

Q702 FL tube

Standby LED PC board

NADIS-7183A

Jog Switch

To Out put terminal PC board

AC inlet terminal PC board

To P902 (Output terminal PC board)

POWER SUPPLY UNIT

24150020 <MDD/MJJ> only
24150021 <MUP/MUT/
MUS/MUR> only

NAPS-7212

NASW-7186

Power switch
PC board

MDD: 120V VC, 60Hz
MUP: 230-240V AC, 50/60Hz
MUT,MUS,MUR: 100-240V AC, 50/60Hz

CAUTION

FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD, REPLACE
ONLY WITH FUSE OF SAME TYPE
AND RATING INDICATED.

ATTENTION

AFIN D'ASSURER UNE PROTECTION
PERMANENTE CONTRE LES RISQUES
D'INCENDIE, REMPLACER UNIQUEMENT
PAR UN FUSIBLE DE MEME TYPE
ET CALIBRATION COMME INDIQUE.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES
THAT THE FUSE USED IS SLOW OPERATING TYPE
FOR CONTINUED PROTECTION AGAINST FIRE
HAZARD,REPLACE WITH SAME TYPE FUSE. FOR FUSE
RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL.

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTLISE EST
E LENT.POUR UNE PROTECTION PERMANENTE,N'UTILISER
QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST
INDIQUE LA QU LE PRESENT SYMBOL EST APPOSE.

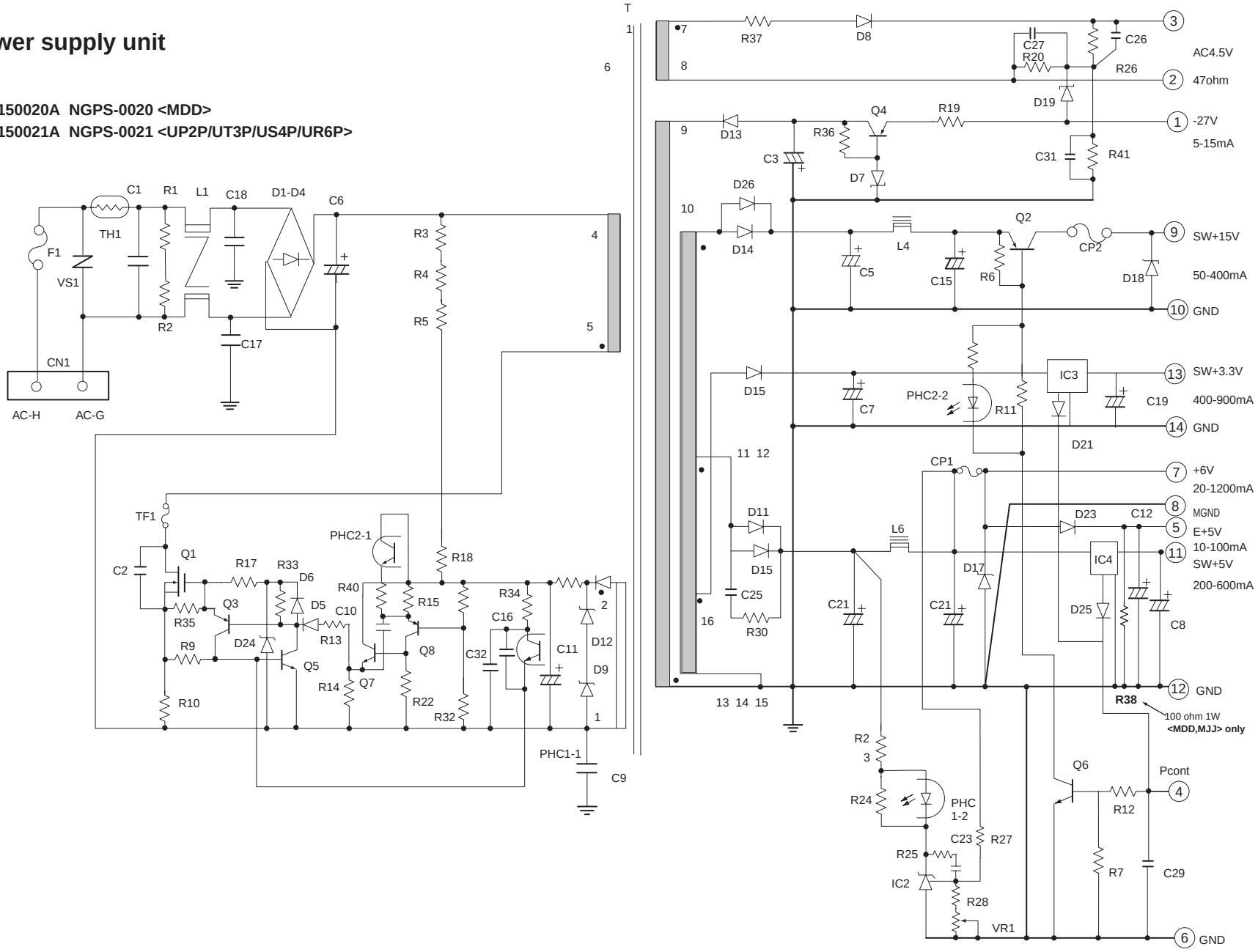
NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITHVOLTMETER) IS DCVOLTAGE. (NO INPUT SIGNAL)
- ELECTROLYTIC CAPACITORS ( ) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→3pF 330→33pF 331 330pF 333→0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAM

Power supply unit

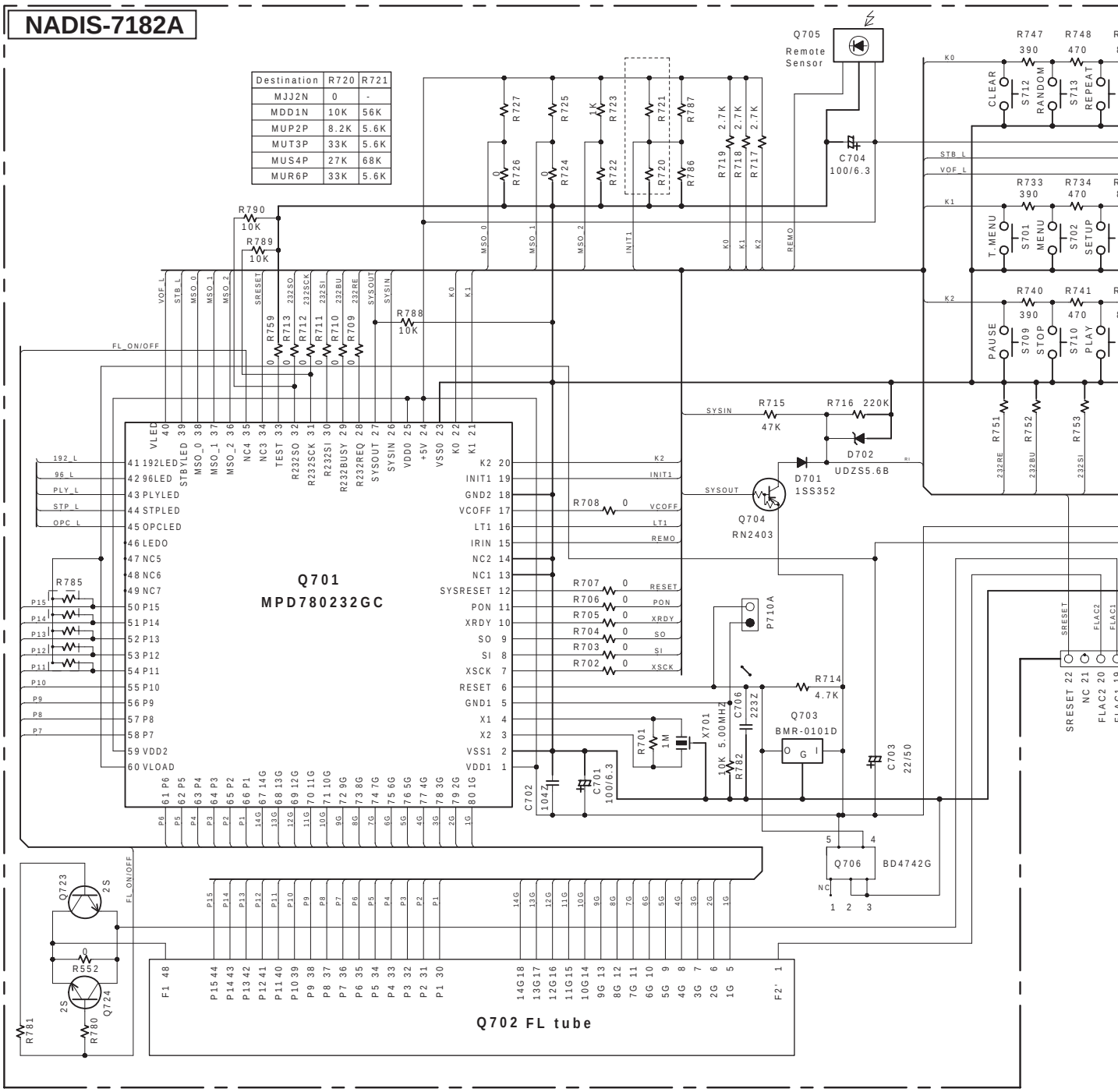
24150020A NGPS-0020 <MDD>
24150021A NGPS-0021 <UP2P/UT3P/US4P/UR6P>



SCHEMATIC DIAGRAMS

Display circuit PC board

NADIS-7182A

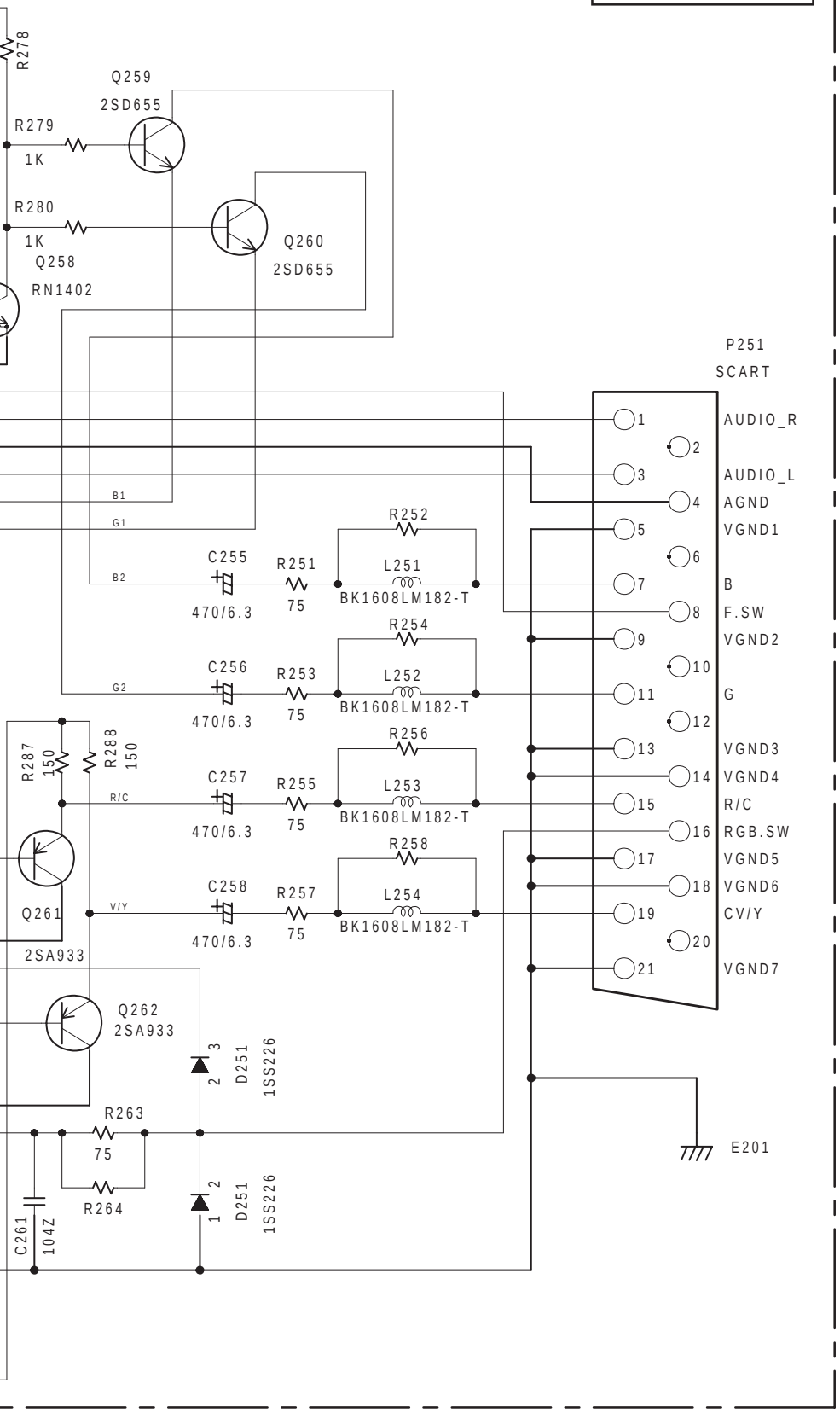


NOTE

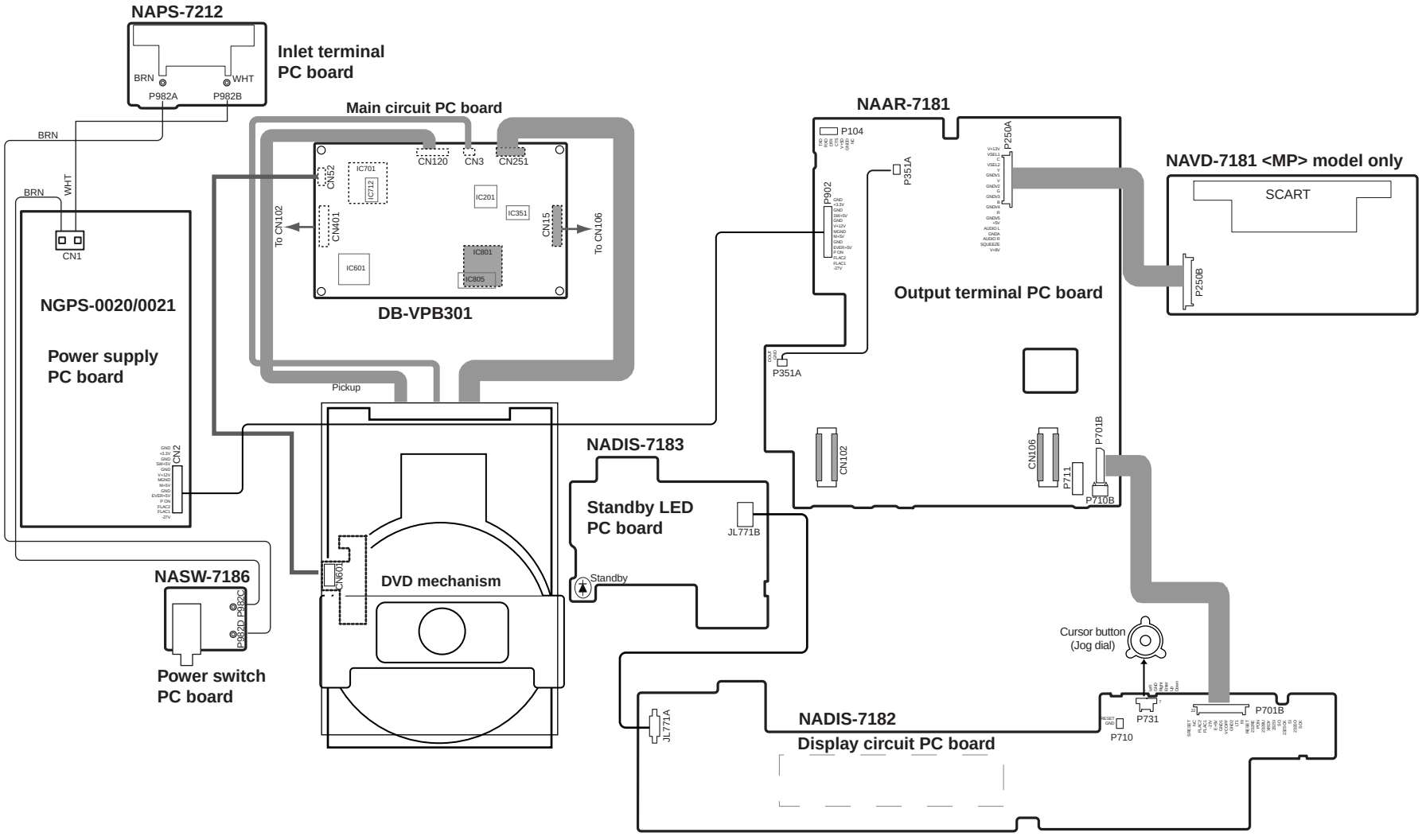
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ⟨ ⟩ IS DC VOLTAGE. (NO INPUT SIGNAL)
- ELECTROLYTIC CAPACITORS (⊣⊢) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→3pF 330→33pF 331 330pF 333→0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ○○○ ↙ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

E F G H

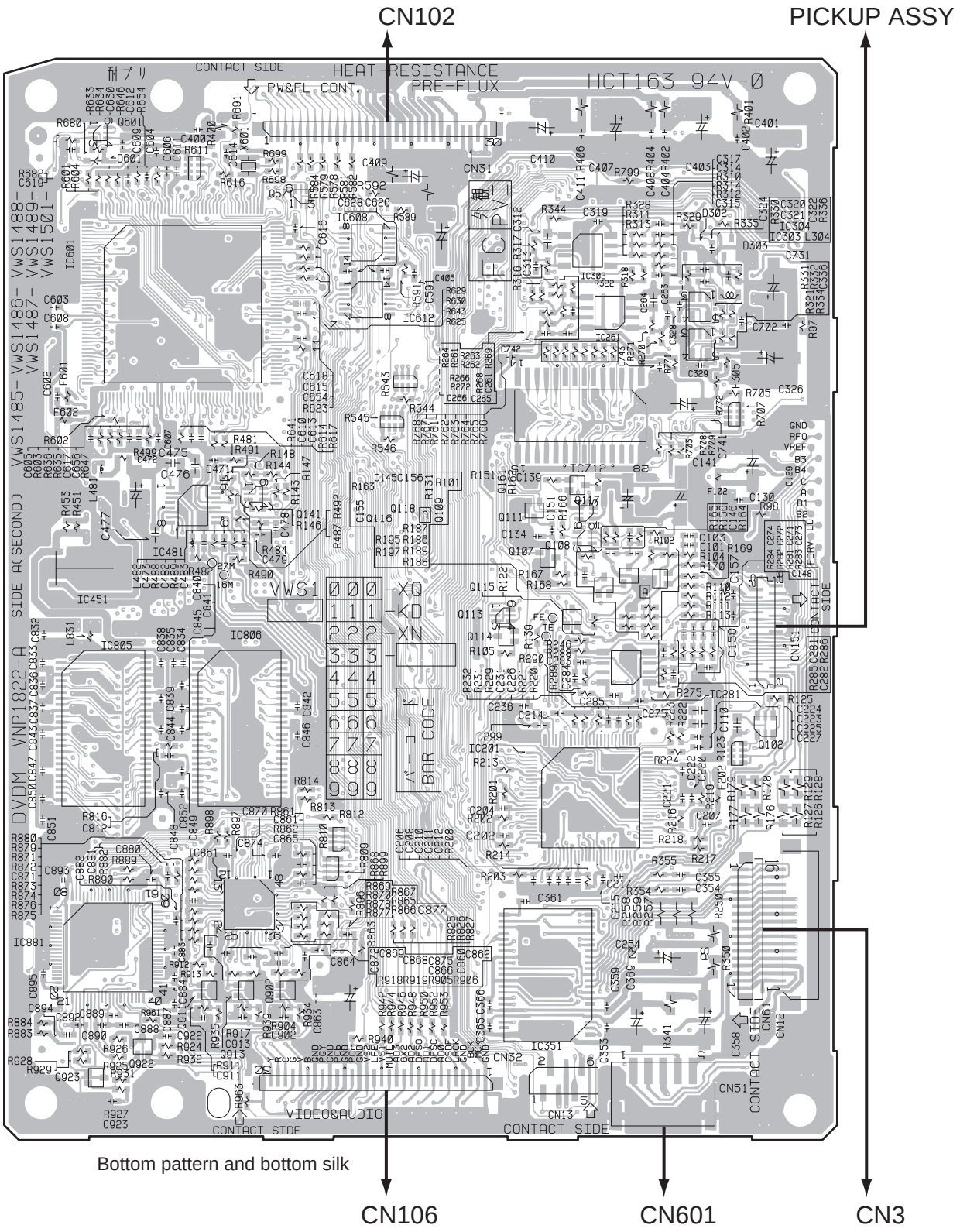
NAVD-7187



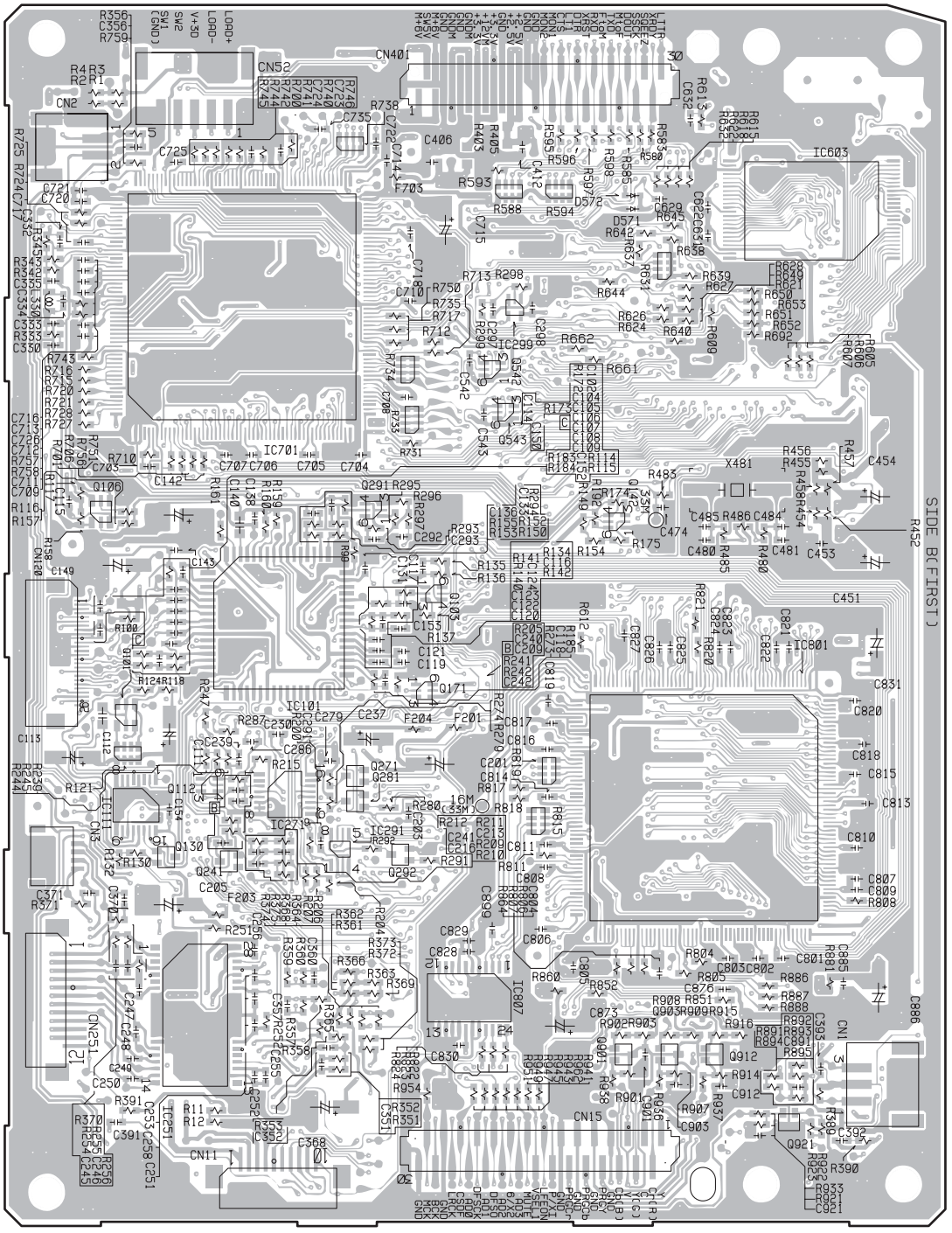
PC BOARD CONNECTION DIAGRAM



PRINTED CIRCUIT BOARD VIEW



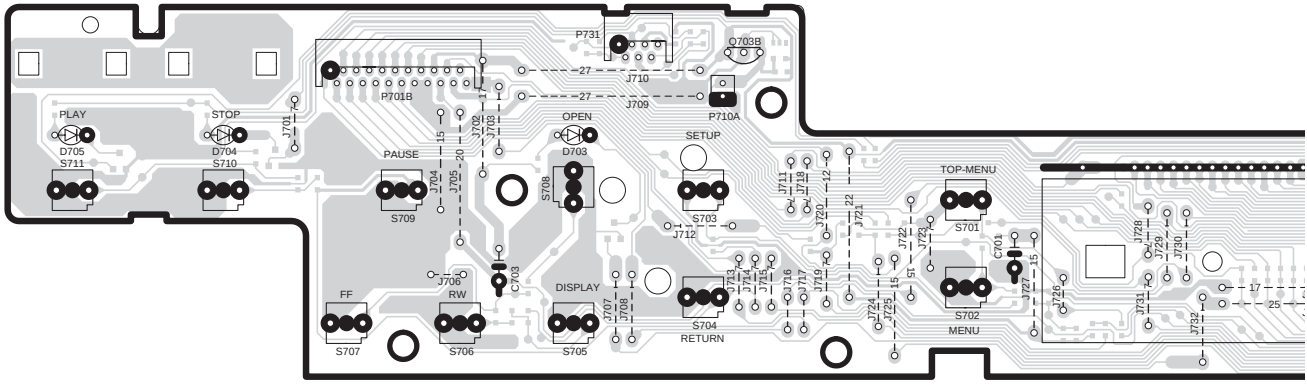
PRINTED CIRCUIT BOARD VIEW



Top pattern and top silk

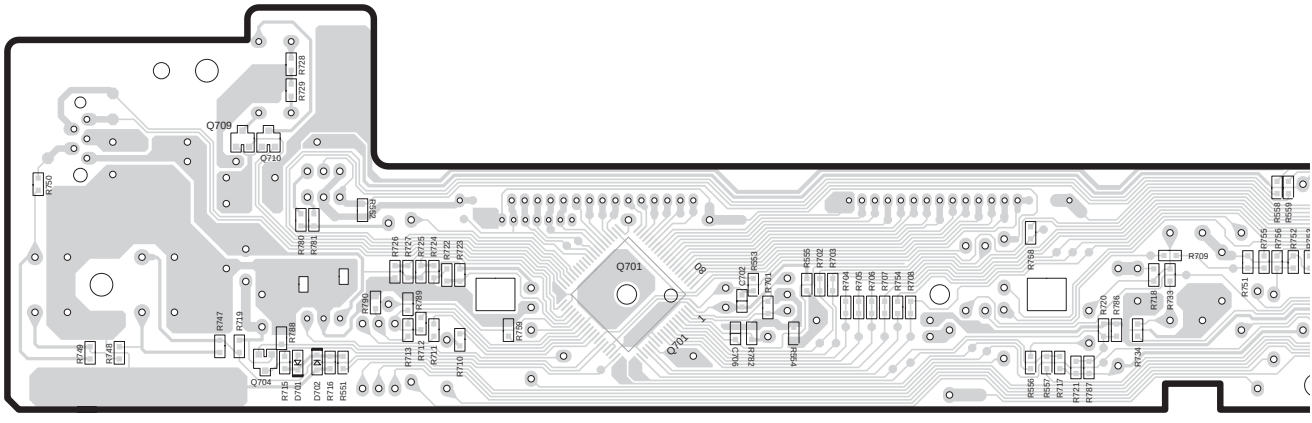
PRINTED CIRCUIT BOARD VIEWS

U2:Display circuit PC board (NADIS-7182)



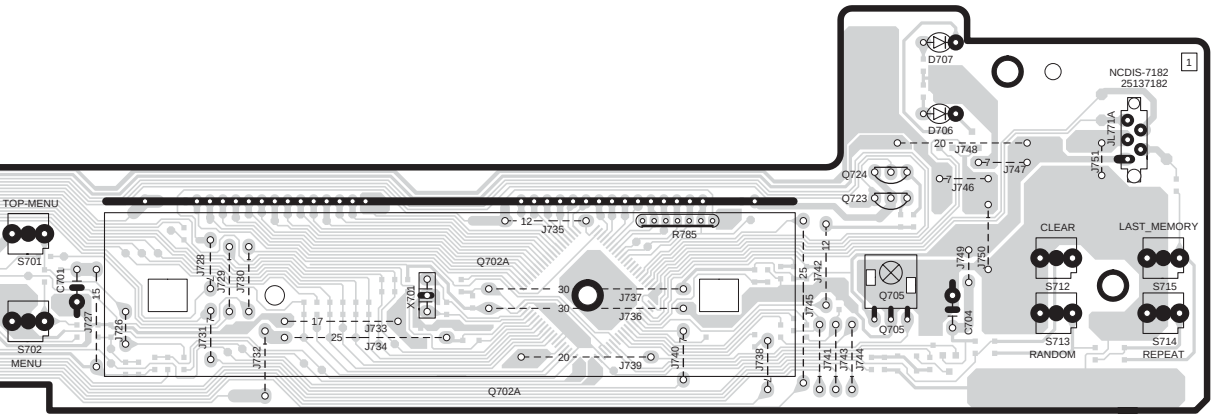
Component side view

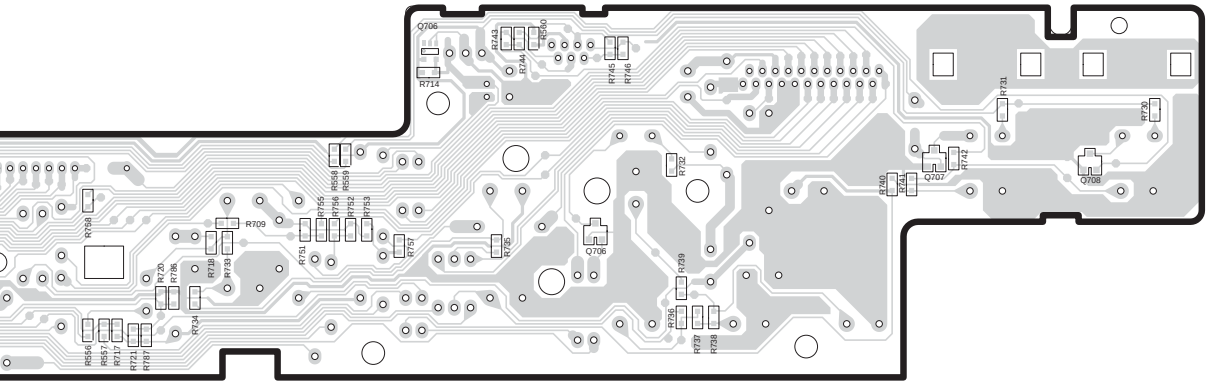
Display circuit PC board (NADIS-7182)



Soldering side view

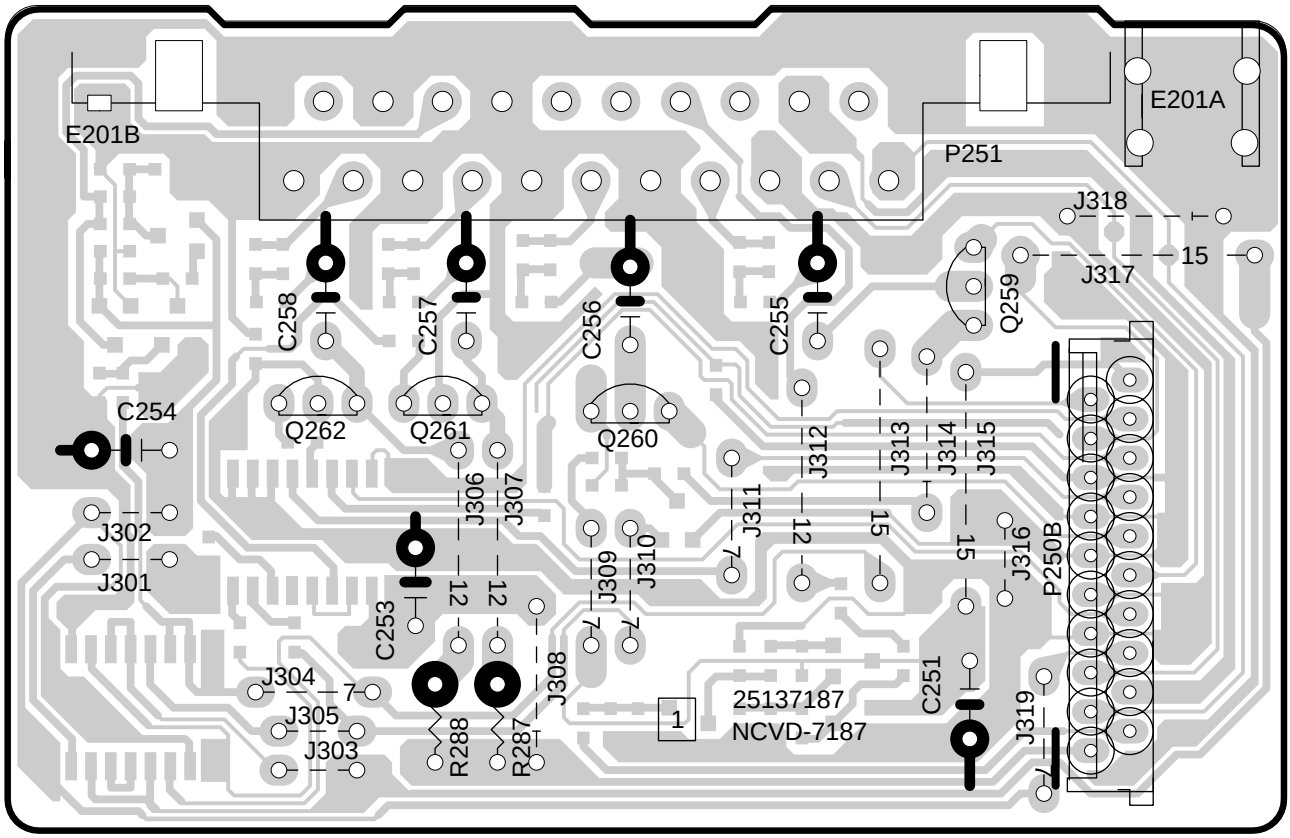
E F G


D707
D706
NCDIS-7182
25137182
JL771A
J751
J748
J747
J746
Q724
Q723
TOP-MENU
S701
S702
MENU
C701
J727
J726
J728
J729
J730
J731
J732
J733
J734
X701
Q702A
J735
R785
J737
J736
J739
J740
J738
J745
J742
Q705
J749
J750
Q704
CLEAR
LAST_MEMORY
S712
S715
S713
RANDOM
S714
REPEAT
J741
J743
J744

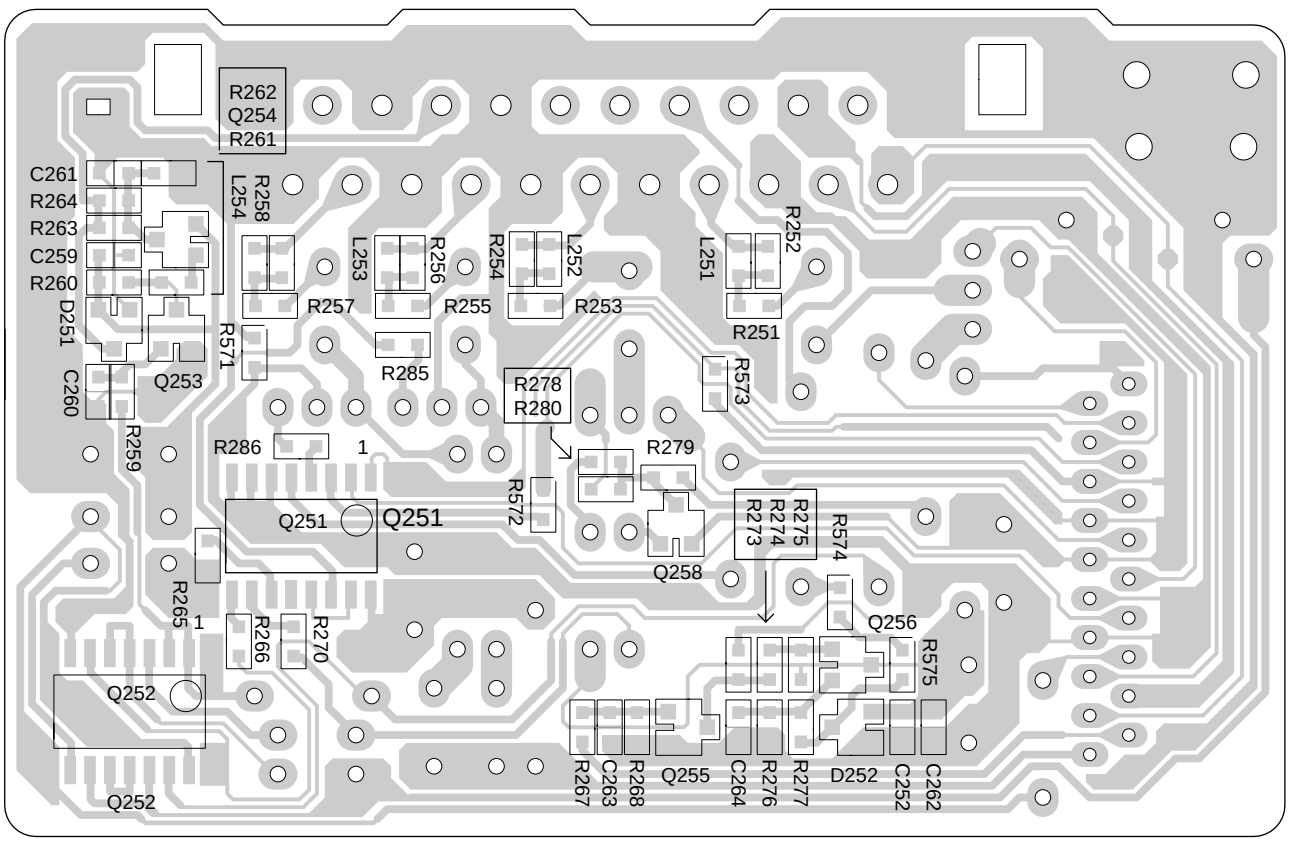

Q706
R714
R743
R744
R745
R746
R731
R730
R732
R740
R741
Q707
R742
Q708
R709
R748
R755
R756
R752
R753
R751
R757
R725
R739
R738
R736
R720
R734
R556
R557
R717
R721
R787

PRINTED CIRCUIT BOARD VIEWS

U8: SCART terminal PC board <MUP> only



Component side view



Soldering side view

15mm

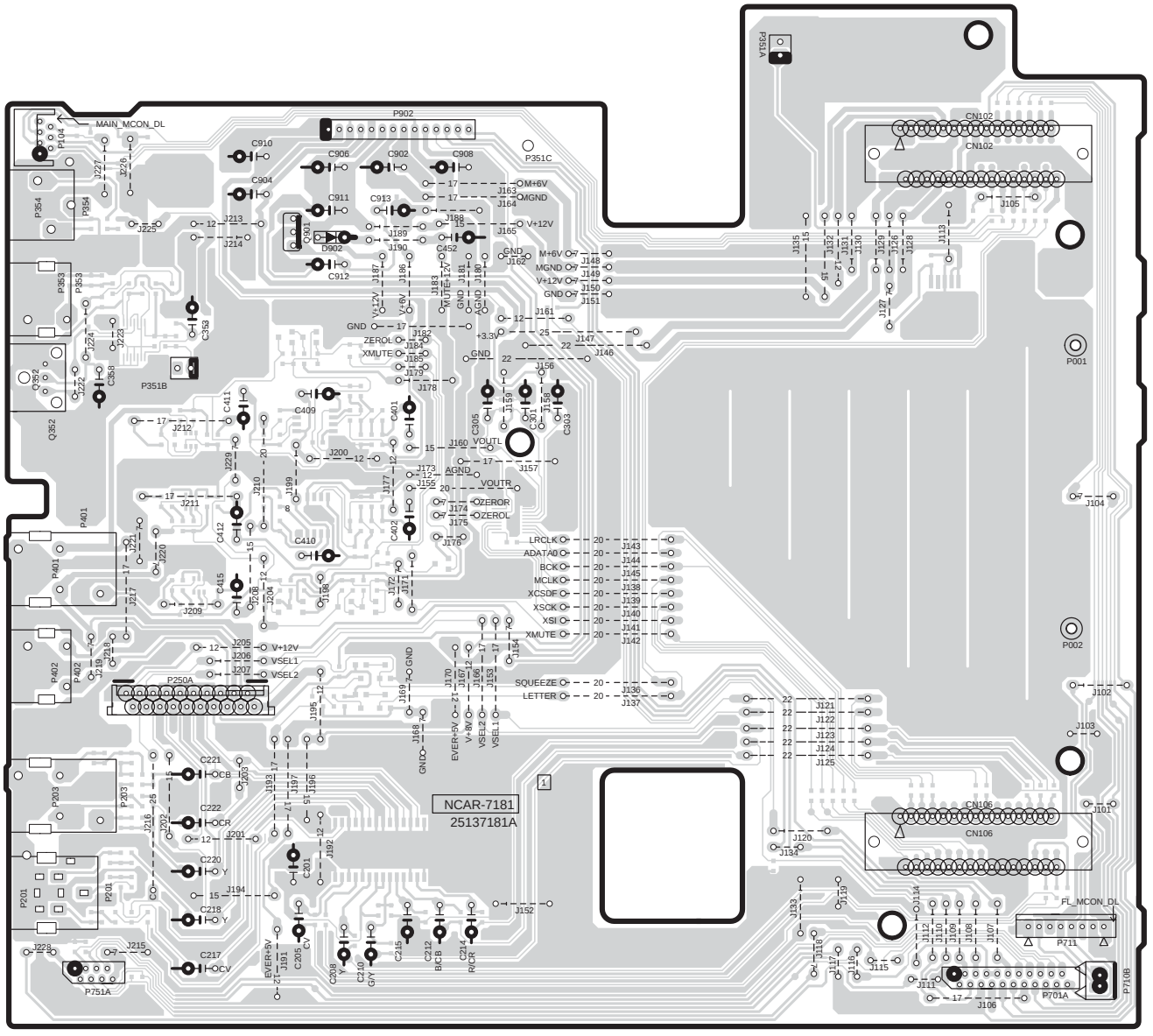
A B C D

20mm

1 2 3 4 5

PRINTED CIRCUIT BOARD VIEWS

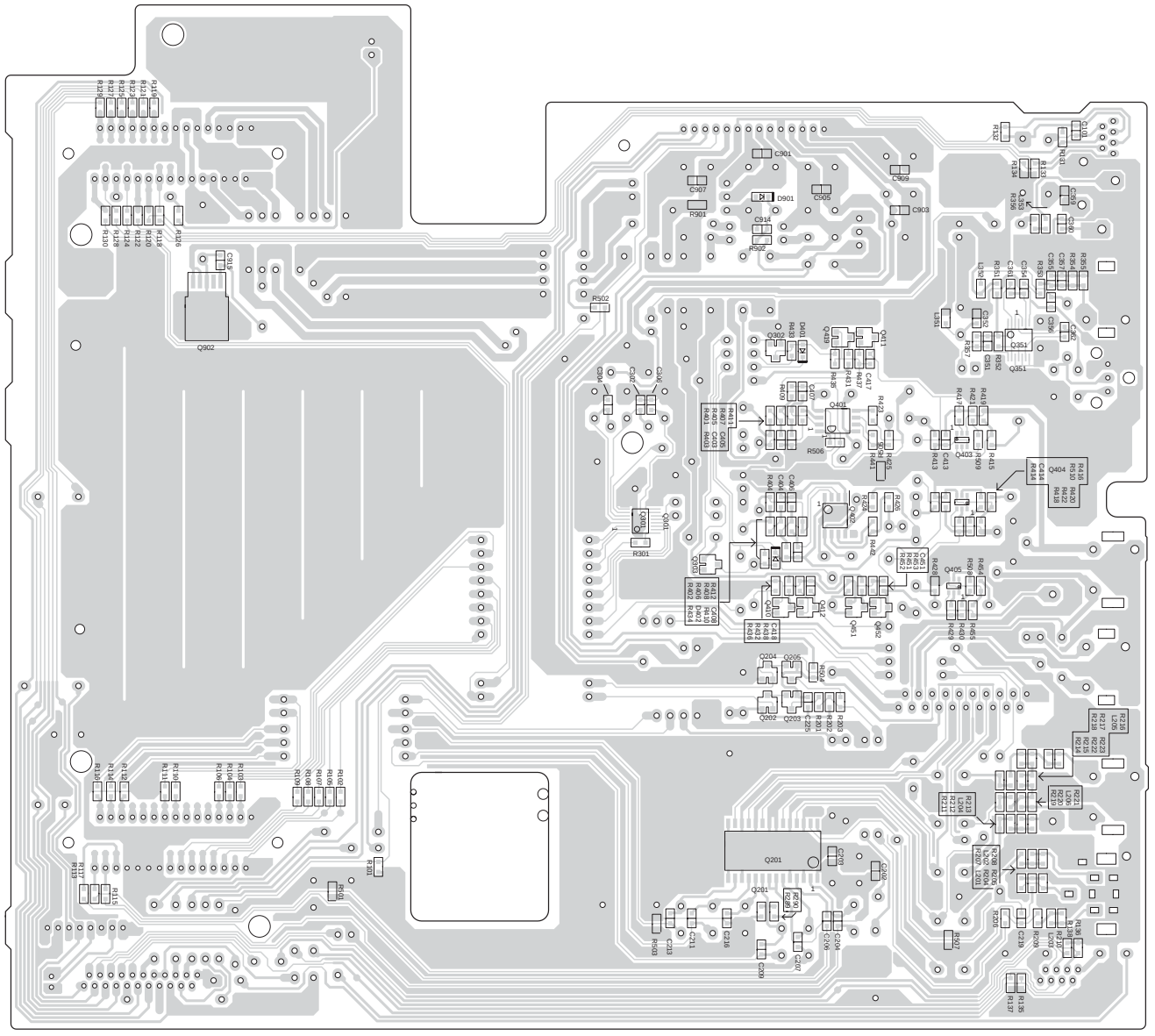
U1:Output terminal PC board (NAAR-7181A)



Component side view

E F G

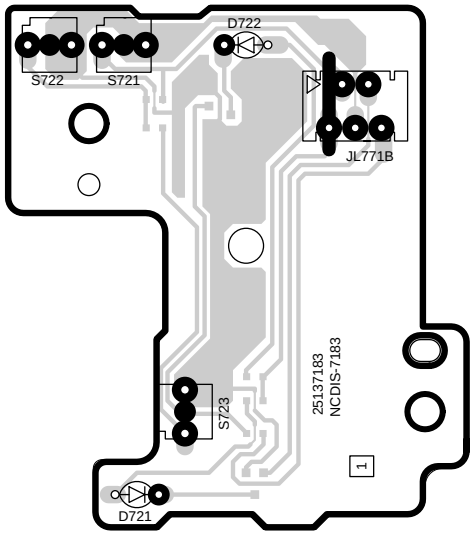
Output terminal PC board



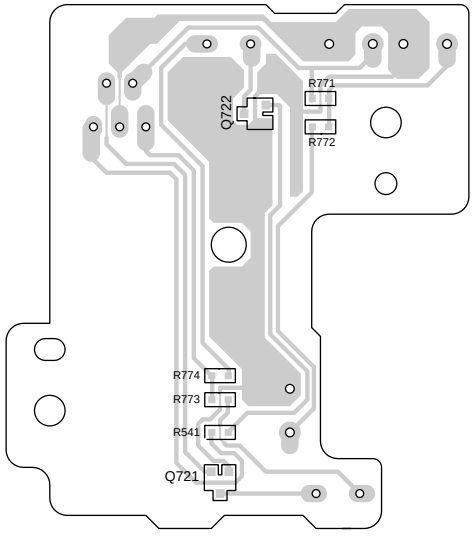
Soldering side view

PRINTED CIRCUIT BOARD VIEWS

U3:Standby LED PC board

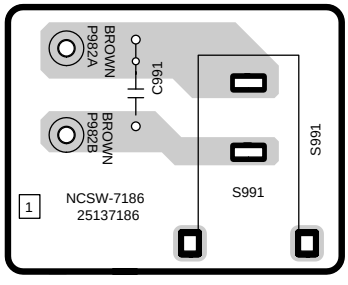


Component side view



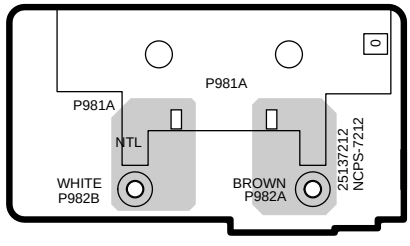
Soldering side view

U6: Power switch PC board



Component side view

U9: AC inlet terminal PC board



Component side view

PRINTED CIRCUIT BOARD PARTS LIST

Output terminal PC board (NAAR-7181B-1A/1B/1C/1D/1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q201	22241623R2	MM1540BF
Q251	222840531R2O	TC4053BF <UP>
Q252	222740007R2O	TC74HCT00AF <UP>
Q301	22241617R2	DB-VCP301(PCM-1742KE)
Q351	22274004HR2O	TC74VHCU04FT
Q401,Q402	22240581R2	NJM4565M or
	22241383R2	NJM4565M-D
Q901	222780085	78M08HF
Q902	22241515R2	PQ025EZ5MZP
	Transistors	
Q202,Q204	2216340R2 or	KRC107S or
	2216260R2	RN1407
Q203,Q205	2216230R2 or	KRA103Sb or
	2214540R2	RN2403
Q253,Q255,	2216174R2 or	KTC3875-Y or
Q256	2213144R2 or	2SC2712-Y or
	2213145R2 or	2SC2712-GR or
	2216175R2	KTC3875-GR <UP>
Q254	2214374R2 or	2SA1162-Y or
	2214375R2 or	2SA1162-GR or
	2216185R2	KTA1504-GR <UP>
Q258	2216190R2 or	KRC102S or
	2214470R2	RN1402 <UP>
Q259,Q360	2211705 or	2SD655-E or
	2211706 or	2SD655-F or
	2216002	KTC2874-B <UP>
Q261,Q262	2213354 or	2SA933S-R or
	2213355 or	2SA933S-S or
	2215995	KTA1267-GR <UP>
Q303,Q410	2216340R2 or	KRC107S or
	2216260R2	RN1407
Q403-Q405	2216141R2	HN1C03F-B
Q412	2214373R2	2SA1162-O or
	2214374R2	2SA1162-Y or
	2216183R2	KTA1504-O or
	2216184R2	KTA1504-Y or
	2216185R2	KTA1504-GR
	Photo coupler	
Q352	24120093	JFJ3000
	Diodes	
D251,D252	223266R2	1SS226 <UP>
D402	223234R2 or	1SS352 or
	223269R2	1SS355
D403	223163	1SS133
D901	224550510R2	UDZS5.1B, Zener
	Coils	
L201-L203,	230958R1	BK1608LM182-T
L351-L353		
L204,L205,	230958R1	BK1608LM182-T
L206		<MD,UT,US,UR>
L251-L254	230958R1	BK1608LM182-T <UP>

CIRCUIT NO.	PART NO.	DESCRIPTION
	Sockets	
CN102,CN106	25052610	NSCT-30P-2507
P104	25052344	NSCT-7P2241 or
	25051889	NSCT-7P16761 or
	25052528	NSCT-7P2425
P250A,P250B	25052216	NSCT-20P2113 or
	25051827	NSCT-20P1614 or
	25052029	NSCT-20P1816 <UP>
P251	25052279	NSCT-21P2176
	Sockets AS	
P902	2002A392815	NSAS-28P0742
P351A	200BB190415	NSAS-4P0816
	Jacks	
P201	25045656	NPJ-5PDBY456, S-Video
P203	25045654	NPJ-3PDGLR454, Component
		out <UP,UT,US,UR>
P353	25045548	NPJ-1PDOR369, Coaxial
P354	25045330	NPJ-2PDBL184 or
	25045481	NPJ-2PDBL299, RI remote
P401	25045655	NPJ-3PDBRW455, Analog out
	Resaistors	
R287	443521514	150 ohm+/-5%, 1/2W,
		Metal oxide <UP>
	Capacitors	
C201,C409	354741019	100uF,16V,Elect.
C410, C911,		
C912,C210		
C215,C913	354744709	47uF,16V,Elect.
C217,C218,	354724719	470uF,6.3V,Elect.
C221,C222		
C220	354721029	1000uF,6.3V,Elect. <MD/UT/US>
C251,C253	354741019	100uF,16V,Elect.<UP>
C254	354721019	100uF,6.3V,Elect.<UP>
C255-C258	354724719	470uF,6.3V,Elect. <UP>
C301,C303,	354721019	100uF,6.3V,Elect.
C305,C353 ,		
C358		
C401,C402,	354782209	22uF,50V,Elect.
C411,C412,		
C415		
C902,C906	354742219	220uF,16V,Elect.
C904,C908,	354722219	220uF,6.3V,Elect.
C910		
Shield plate		
E201B	27150455	<UP>

PRINTED CIRCUIT BOARD PARTS LIST

Display circuit PC board (NADIS-7182B-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q701	22241727R3	MPD780232GC-045-8BT
Q706	22241713R2	BD4742G
	FL tube	
Q702A	212219	14-BT-68GNK
	Transistors	
Q704	2216230R2	KRA103S or
	2214540R2	RN2403
	Remote sensor	
Q705	241336	PIC-37043TH2 or
	241329	PIC-26043TH2
	Capacitors	
C701	355721019	100uF,6.3V,Elect.
C703	355782209	
C704	355721019	
	Resonator	
X701	3010242	CST5.00MGW
	Diodes	
D701	223234R2 or	1SS352 or
	223269R2	1SS355, Chip
D702	224550560R2	UDZS5.6B, Zener
	Sockets	
P701A	25052322 or	NSCT-22P2219 or
	25051946 or	NSCT-22P1733 or
	25052516	NSCT-22P2413
P701B	25052359 or	NSCT-22P2256 or
	25051904 or	NSCT-22P1691 or
	25052543	NSCT-22P2440
P731	25052344 or	NSCT-7P2241 or
	25051889 or	NSCT-7P1676 or
	25052528	NSCT-7P2425
JL771A	25051089	NSCT-5P876
	Switches	
S701-S715	25035699	NPS-111-S662
	FL holder	
Q702B	27191141	

Standby LED PC board (NADIS-7183B-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q721	2216340R2	KRC107S or
	2216260R2	RN1407
	LED	
D721	225290T	SEL4110R, Standby ind.
	Switch	
S723	25035699	NPS-111-S662, Standby
	Plug	
JL771B	25055626	NPLG-5P588

AC inlet terminal PC board (NAPS-7212B-1A/1B/1C/1D/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminal	
P981A	⚠ 25056006	NPLG-2P956, inlet <MD>
	⚠ 25056027	NPLG-2P977, inlet <UP,UT,US,UR>
	Socket AS	
P982B	2009990661UL	NSAS-2P0921

Power switch PC board (NASW-7186B-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C991	⚠ 3500196S	RE275V-103M
	Switch	
S991	⚠ 25035703	NPS-111-L666P or
	⚠ 25035550	NPS-111-L512P, Power SW

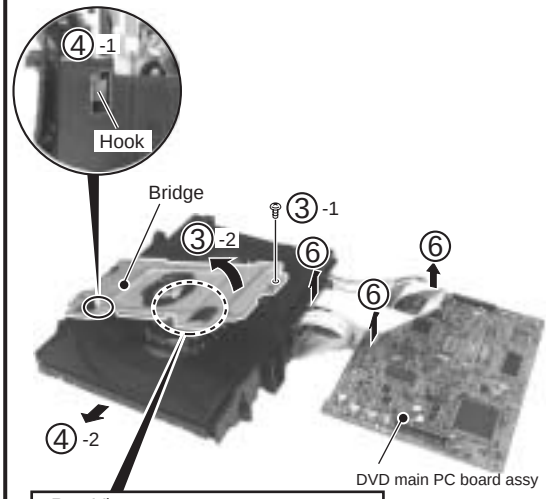
Power supply unit (NGPS-0020, NGPS-0021)

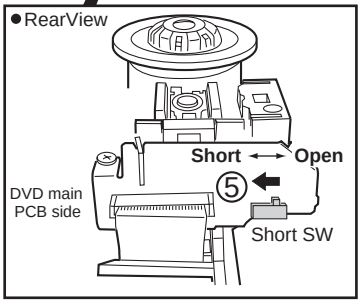
CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistor	
R38	443621014	Metal oxide, 100 ohm 1W, +/-I96I985% <MDD,MJJ>
	Capacitor	
C12	354721029	1000uF 6.3V, Elect

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

Disassembly of the Traverse Mechanism Assy

① Remove the top cover and Tray Panel.
② Remove the Tray panel and Front Panel.
③ Remove the Bridge (Screw1).
④ Pull out the Tray and remove it while unhooking a Hook.
⑤ Turn the Short SW to Short side.
⑥ Remove three connectors.

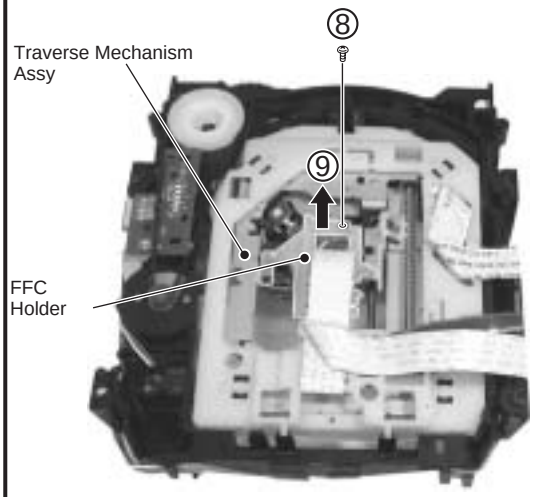




⑦ Remove the Loading Mechanism Assy (Screws 4).
⑧ Remove a screw.

Cautions:
Screw is locked with Silicone Adhesive.
Please lock it with Silicone Adhesive when installs it.

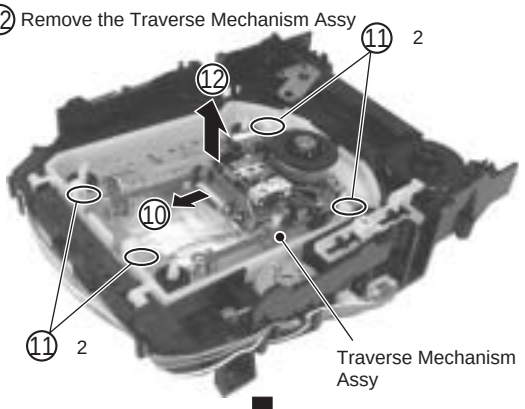
⑨ Remove the FFC Holder with the state which Flexible Cable was attached.



●Bottom View

●When Removing The Traverse Mechanism Assy

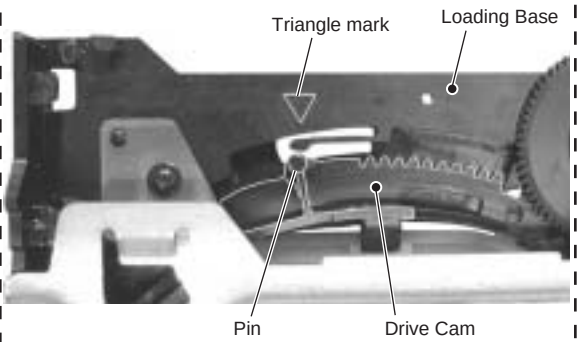
⑩ Remove the Pickup Flexible Cable
⑪ Unhook (4)
⑫ Remove the Traverse Mechanism Assy



Exchange

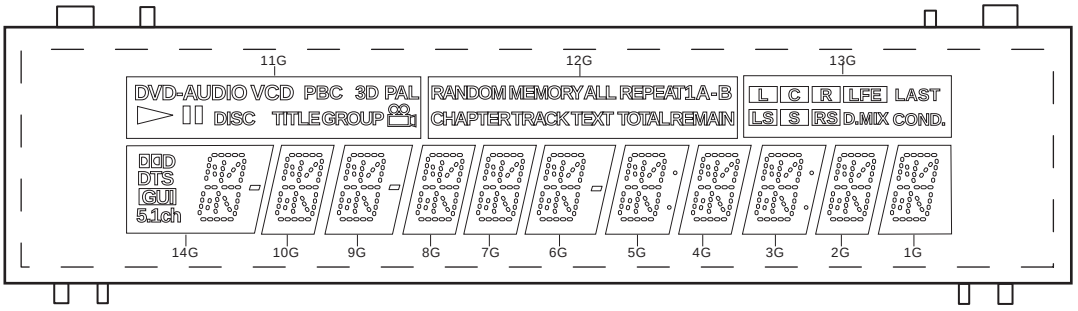
☞Caution in the tray insertion

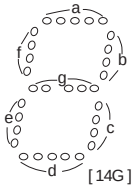
In the Tray insertion, insert it after matching a triangle mark of the Loading Base and a position of pin of the Drive Cam.



FL TUBE VIEW

Pin connection





48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
F2	NX	NP	NP	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	NX	F1

ANODE CONNECTION

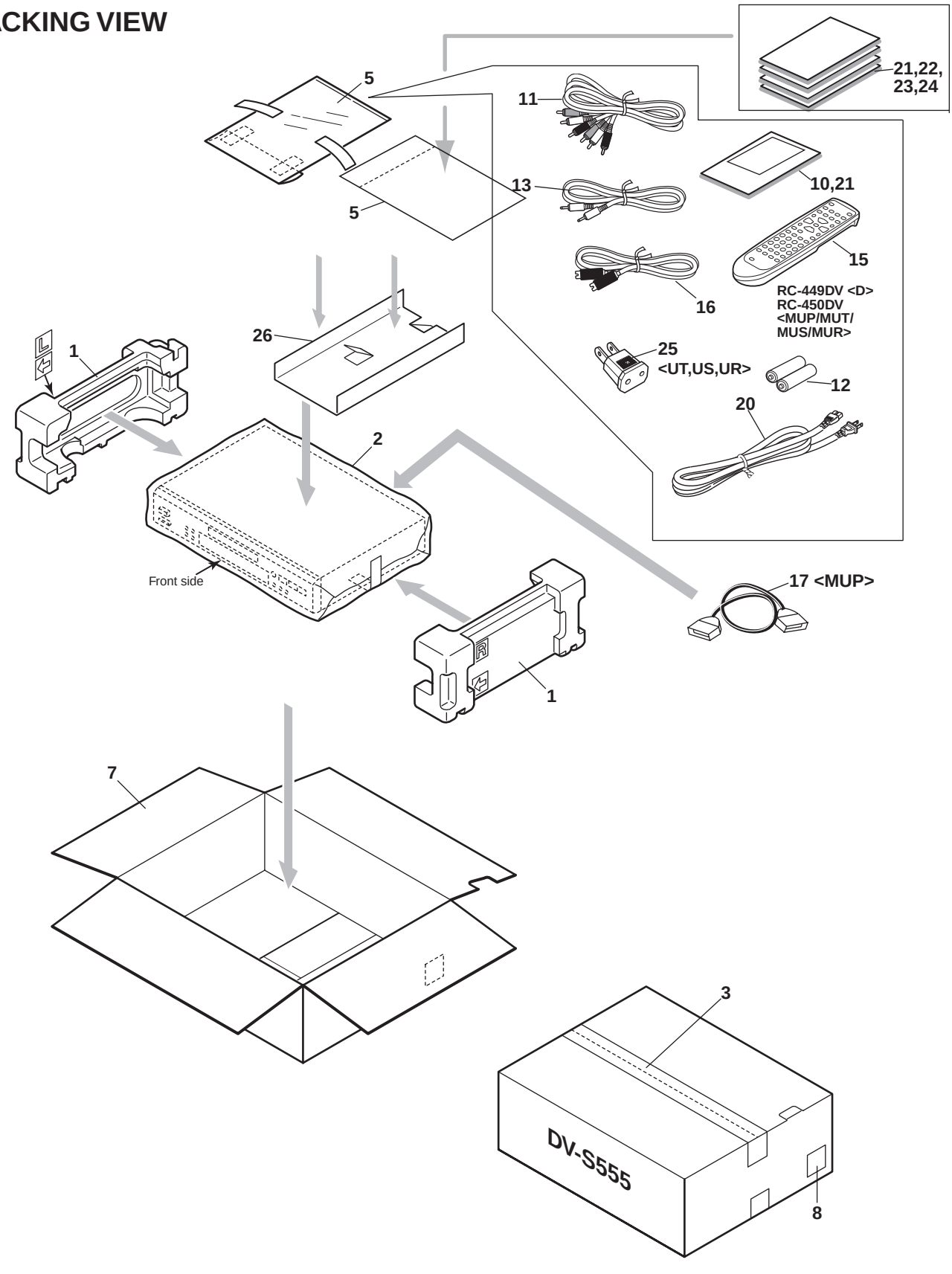
	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G
P1	a	a	a	a	a	a	a	a	a	a	PAL	RANDOM	L	a
P2	h	h	h	h	h	h	h	h	h	h		MEMORY	C	DD D
P3	l	j	j	j	j	j	j	j	j	j	3D	ALL	R	DTS
P4	k	k	k	k	k	k	k	k	k	k	GROUP	REPEAT	LS	GUI
P5	b	b	b	b	b	b	b	b	b	b	PBC	1	S	b
P6	f	f	f	f	f	f	f	f	f	f	TITLE	A	RS	f
P7	m	m	m	m	m	m	m	m	m	m	CD	- B	LFE	5.1ch
P8	g	g	g	g	g	g	g	g	g	g	V	TEXT	D.MIX	g
P9	c	c	c	c	c	c	c	c	c	c	DISC	–	LAST	c
P10	e	e	e	e	e	e	e	e	e	e	-AUDIO	TRACK	COND.	e
P11	r	r	e	r	r	r	r	r	r	r		CHAPTER	–	–
P12	p	p	p	p	p	p	p	p	p	p		TOTAL	–	–
P13	n	n	n	n	n	n	n	n	n	n	DVD	REMAIN	–	–
P14	d	d	d	d	d	d	d	d	d	d	–	–	–	d
P15	–	–	col	–	col		–	–		–	–	–	–	

MICROPROCESSOE TERMINAL DESCRIPTION

MPD780232GC-041-8BT

Pin No.	Symbol	Function	I/O	Description	Pin No.	Symbol	Function	I/O	Description
1	Vdd1	Vdd1	—	Power supply, +5V	41	P45/FIP37	SMP192LED	O	Sampling rate 192 LED control pin
2	Vss1	Vss1	—	Ground pin	42	P44/FIP36	SMP96LED	O	Sampling rate 96 LED control pin
3	X2	X2	—	Main clock input pin (5MHz)	43	P43/FIP35	PLYLED	O	Play LED control output pin
4	X1	X1	—	Main clock input pin (5MHz)	44	P42/FIP34	STPLED	O	Stop LED control output pin
5	IC	GND	—	Ground pin	45	P41/FIP33	OPCLLED	O	Open/ close LED control pin
6	~RESET	RESET	—	Reset pin of microprocessor	46	P40/FIP32	LED0	O	General LED control pin
7	P27/~SCK1	XSCK	O	Clock output pin for writhing of flash ROM	47	P37/FIP31		O	Not used
8	P26/SI1	SI	I	Data input pin for writhing of flash ROM	48	P36/FIP30		O	Not used
9	P25/SO1	SO	O	Data output pin for writhing of flash ROM	49	P35/FIP29		O	Not used
10	P24/BUSY	XRDY	O	XRDY output pin	50	P34/FIP28	P15	O	FL segment (P15) control output pin
11	P23	PON	O	Power ON control signal output pin (Power ON: "H")	51	P33/FIP27	P14	O	FL segment (P14) control output pin
12	P22	SYSRESET	O	Reset control output pin	52	P32/FIP26	P13	O	FL segment (P13) control output pin
13	P21/SO3		I	Not used	53	P31/FIP25	P12	O	FL segment (P12) control output pin
14	P20/~SCK3		I	Not used	54	P30/FIP24	P11	O	FL segment (P11) control output pin
15	P00/INTP0	~IRIN	I	Remote control1 signal input pin.	55	FIP23	P10	—	FL segment (P10) control output pin
16	P01/INTP1	LT1	I	LT1 data input pin	56	FIP22	P9	—	FL segment (P9) control output pin
17	P02/TI	VCOFF	O	Video circuit off control output pin	57	FIP21	P8	—	FL segment (P8) control output pin
18	AVss	GND	—	Ground pin for D/A converter	58	FIP20	P7	—	FL segment (P7) control output pin
19	ANI3	INIT1	I	Initializing input pin (Analog signal)	59	Vdd2	Vdd2	—	Power supply pin (+5V)
20	ANI2	K2	I	Key input pin	60	Vload	Vload	—	FIP control pin to connect pull down resistor
21	ANI1	K1	I	Key input pin	61	FIP19	P6	—	FL segment (P6) control output pin
22	ANI0	K0	I	Key input pin	62	FIP18	P5	—	FL segment (P5) control output pin
23	Vss0	Vss0	—	Ground pin	63	FIP17	P4	—	FL segment (P4) control output pin
24	AVdd	+5V	—	Power supply pin of D/A converter, +5V	64	FIP16	P3	—	FL segment (P3) control output pin
25	Vdd0	Vdd0	—	Power supply, +5V	65	FIP15	P2	—	FL segment (P2) control output pin
26	P64/FIP52	~SYSIN	I	System buss input pin	66	FIP14	P1	—	FL segment (P1) control output pin
27	P63/FIP51	~SYSOUT	O	System buss output pin	67	FIP13	14G	—	FL grid (G14) output pin
28	P62/FIP50	R232REQ	I	REQ input pin from microprocessor of RS-232C driver	68	FIP12	13G	—	FL grid (G13) output pin
29	P61/FIP49	R232BUSY	I	BUSY input pin from microprocessor of RS-232C driver	69	FIP11	12G	—	FL grid (G12) output pin
30	P60/FIP48	R232SI	I	SI input pin from microprocessor of RS-232C driver	70	FIP10	11G	—	FL grid (G11) output pin
31	P57/FIP47	R232SCK	O	SCK input pin from microprocessor of RS-232C driver	71	FIP9	10G	—	FL grid (G10) output pin
32	P56/FIP46	R232SO	O	SO input pin from microprocessor of RS-232C driver	72	FIP8	9G	—	FL grid (G9) output pin
33	P55/FIP45	TEST	I	Testing pin	73	FIP7	8G	—	FL grid (G8) output pin
34	P54/FIP44	R232RES	O	Reset control output pin to microprocessor of RS-232C driver	74	FIP6	7G	—	FL grid (G7) output pin
35	P53/FIP43	FLON_OFF	O	FL filament on/off control output pin	75	FIP5	6G	—	FL grid (G6) output pin
36	P52/FIP42	MS0_2	I	Model select input pin 2	76	FIP4	5G	—	FL grid (G5) output pin
37	P51/FIP41	MS0_1	I	Model select input pin 1	77	FIP3	4G	—	FL grid (G4) output pin
38	P50/FIP40	MS0_0	I	Model select input pin 0	78	FIP2	3G	—	FL grid (G3) output pin
39	P47/FIP39	STBYLED	O	Standby LED control output pin	79	FIP1	2G	—	FL grid (G2) output pin
40	P46/FIP38	VCOFFLED	O	Video circuit off LED control output pin	80	FIP0	1G	—	FL grid (G1) output pin

PACKING VIEW



PACKING PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	29091986	Pad ass'y
2	29100037-1A	Poly bag, 650 x 500
3	29110098	Tape, W50 3M NO 371
5	29100097-1A	Polybag, 320 x 250
7	29053753	Caton box <MDD> <B>
	29053754	Caton box <MUP> <B>
	29053755	Caton box <MUT> <B>
	29053756	Caton box <MUS> <B>
	29053757	Caton box <MUP> <S>
	29053758	Caton box <MUT> <G>
	29053759	Caton box <MUS> <G>
	29053760A	Caton box <MUR> <G>
8	29362887	UPC label <B>
	29362885	EAN label <MUP/MUT/MUS> <B>
	29362888	EAN label <MUP> <S>
	29362886	EAN label <MUT/MUS/MUR> <G>
10	29365090	Warranty card <MDD>
11	2010379	Audio video cable
12	3010054	BATTERY UM-3
13	2010200	RI cord
14	29092034	Pad, Top <MUP>
15	24140449	RC-449DV, Remote controller <MDD>
	24140450	RC-450DV, Remote controller <MUP/MUT/MUS/MUS>

REF. NO.	PART NO.	DESCRIPTION
16	2010380	S cord
17	2010368 or	YAF11-0697 or TPX3000
	2010360	RGB cord <MUP>
20	253296HIT	AC-UC-2, Power cord <MDD>
	253299HIT	AS-CEE, Power cord <MUP/MUT/MUS>
	253309HIT	AS-CCEE, Power cord <MUR>
21	29343107A	Instruction manual E <MDD/MUT/MUS/MUR>
	29343108	Instruction manual E <MUP>
22	29343114	Instruction manual U2FS <MUP/MUS>
	29343109	Instruction manual CS <MUR>
23	29343195	Instruction manual U2CtCs <MUT>
	29343113	Instruction manual CT <MUR>
24	29343194	Instruction manual U6 <MUP>
25	25055911	Conversion plug <MUT/MUS/MUR>
26	2909234	Pad, Top <MUP>

<B>: Black color model
<G>: Golden color model
<S>: Silver color model
<MD>: North American area (Regional restriction code- 1)
<MUP>: European area (Regional restriction code- 2)
<MUT>: Some Asian area (Regional restriction code- 3)
<MUS>: South American area (Regional restriction code- 4)
<MUR>: Chinese area (Regional restriction code- 6)

UPGRADE FIRMWARE

1. Data writing for DVD main board

1-1. Writing the F/W data in DVD main board

1-1-1 Set the DVD main board on the unit.

1-1-2 Connect the FFC and Jig between the DVD main board and Personal Computer.
(Using the F/W upgrade Jig board and FFC cable to P104)

1-2-3 Then the power and standby switches are turn on.

1-1-4 Run the data writing program.

EX) Save the program above in C:DV-S555 folder. The program name are

B1BK1048.SZ0, Down.bat, down, ok_down.exe, ok_down

① Open the DOS window

② Key input "cd DV-S555" and then push the ENTER key.
Turn thepower switch on and push the STANDBY switch.

③ Key input the "_down_b1bk1048.szo" and push ENTER.
(Space, FW file name .sz0, zero)

④ Push the ENTER again.

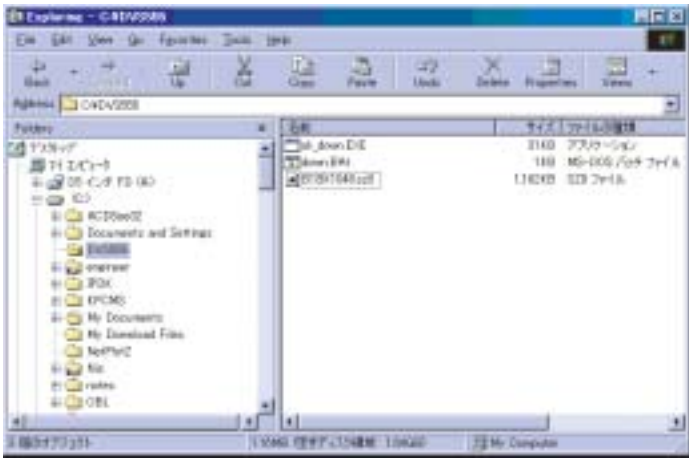
⑤ Key input "MO"and ENTER.

⑥ Key input "SZL"and ENTER.
The program of a computer running automatically.

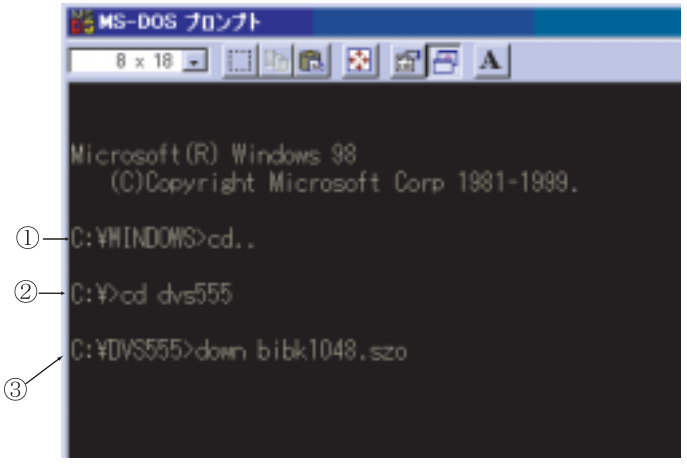
<Display of Computer>

00000000000000000000000000000

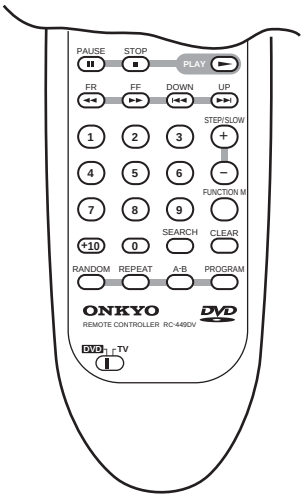
⑦ Turn off the power switch, and disconnect the upgrade kit. (Finish)



MS-DOS prompt



UPGRADE FIRMWARE



RC449DV Remote controller Parts No. 24140449 (U.S.A remote controller)

2. Setting the Region code.

2-1 Turn on the power switch and standby switch is turned on.

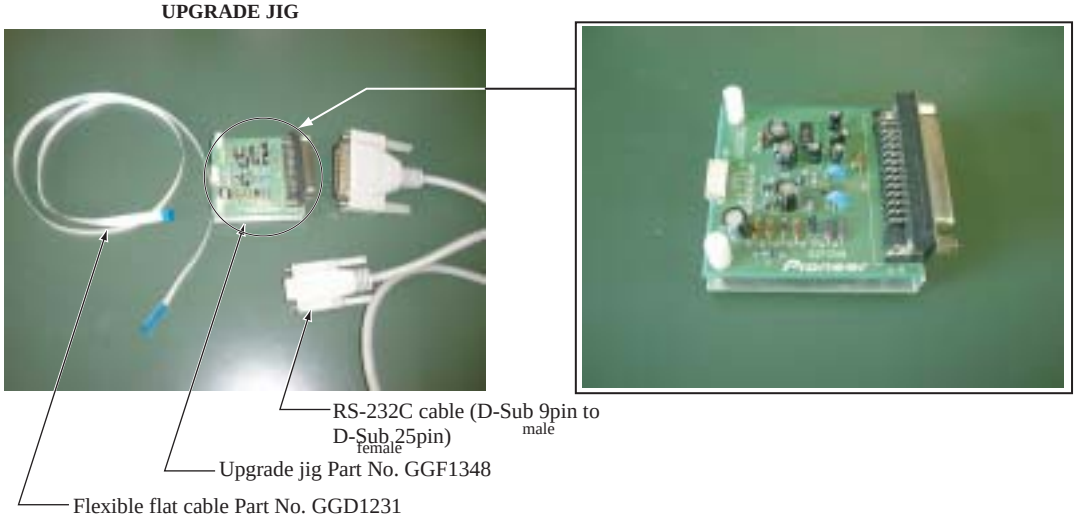
2-2 Select a regional code. (Using the remote controller **RC-449DV Part number 24140449)**

* MDD1N and MJJ2N are automatically chosen. (Automatically witting)

Destination	RC-449DV (Slide SW: TV position)	Transmission Code	Region
MDD1N	*	*	1
MJJ2N	*	*	2
MUP2P	2	D22F 12	2
MUT3P	3	D22F 13	3
MUS4P	4	D22F 14	4
MUR6R	6	D22F 16	6

∗: automatically chosen

UPGRADE JIG



3. Confirm the program

3-1 Press the [SETUP] key.

3-2 Select the "Setup Menu Mode", in the "General" menu". And select "BASIC".

3-3 Push the [DISPLAY] Button. The Region and FW Version information will appear on the TV Display.

<MDD/MUP/MUS/MUR>

[SETUP]

Setup Navigator Start

Auto Start Off ⏎

[ENTER]

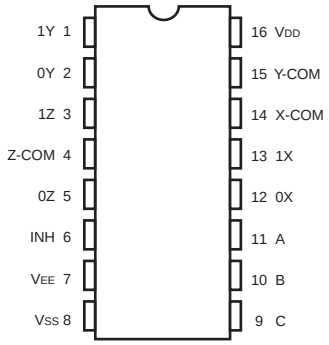
Setup Menu Mode ⏎

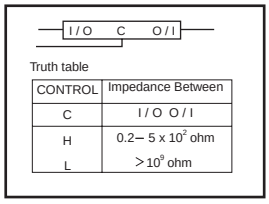
[DISPLAY]

EX) "Region * / Ver:1.048 / AV:6.0/0.3"

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

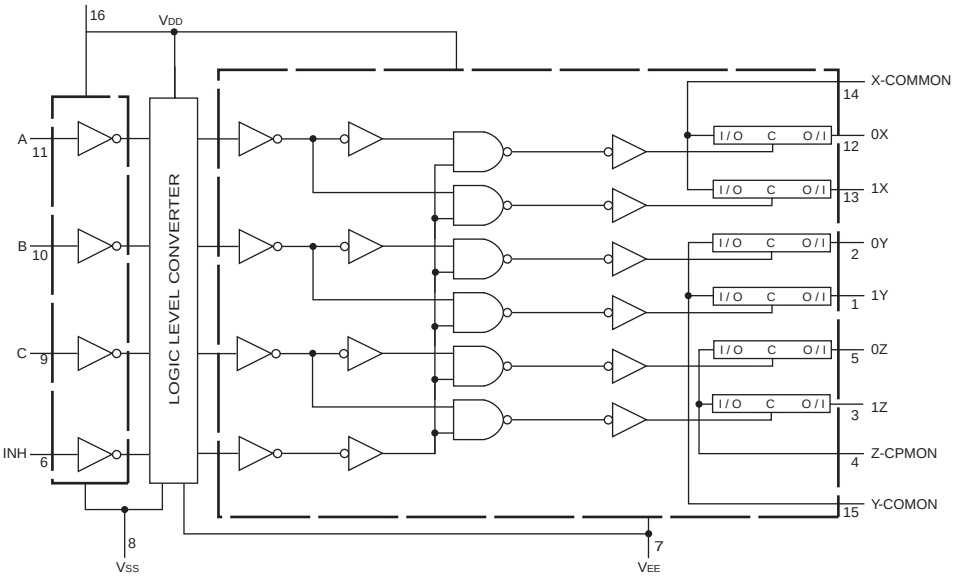
TC4053BF
Triple 2-Channel multiplexer / demultiplexer





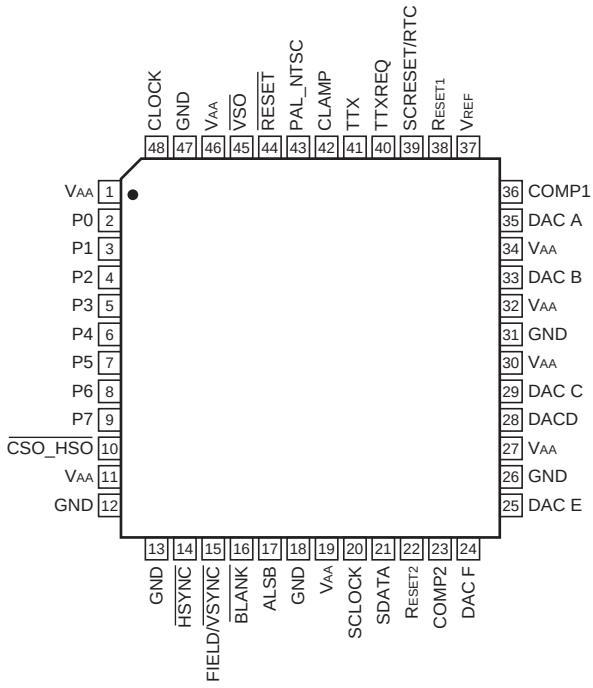
Truth table

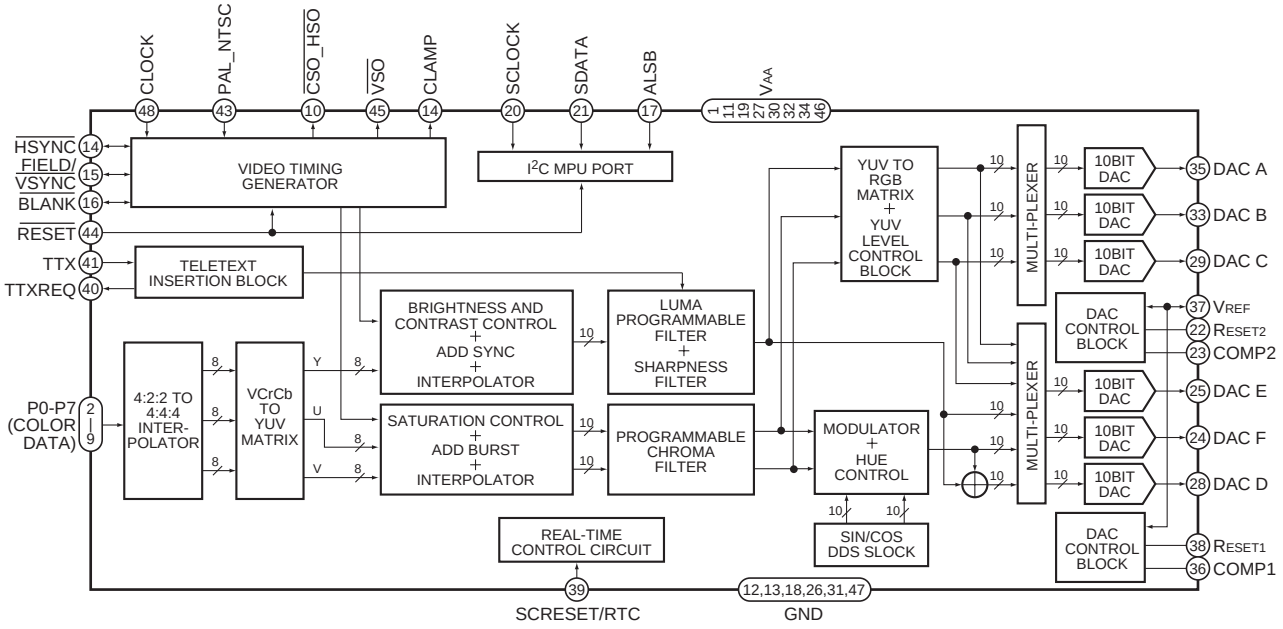
CONTROL	Impedance Between
C	I / O O / I
H	0.2– 5 x 10^2 ohm
L	>10^9 ohm



IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

ADV7172KST (Video Encoder : IC861)



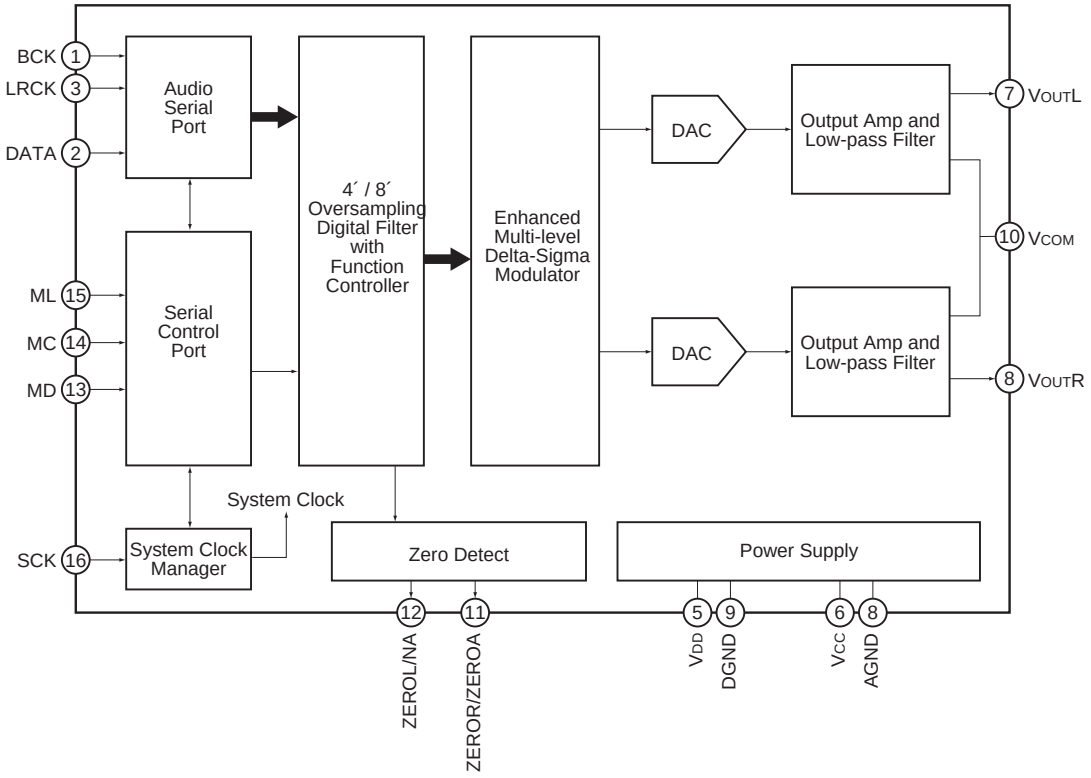


No.	Name	I/O	Pin Function
6	P4	I	8-bit 4 : 2 : 2 Multiplexed YCrCb Pixel Port (P7-P0) P0 represents the LSB
7	P5		
8	P6		
9	P7		
10	CSO_HSO	O	Dual function CSO or HSO TTL Output Sync Signal
11	VAA	P	Power Supply (+3V)o +5V
12	GND	G	Ground Pin
13	GND	G	Ground Pin
14	HSYNC	I/O	HSYNC (Models 1 and 2) Control Signal. This pin may be configured to output (Master Mode) or as an input and accept (Slave Mode) Sync signals.
15	FIELD/VSYNC	I/O	Dual Function FIELD (Mode1) and VSYNC (Mode2) Control Signal. This pin may be configured to output (Master Mode) or as an input (Slave Mode) and accept these control signals.
16	BLANK	I/O	Video Blanking Contrl Signal. The pixel inputs are ignored when this is logic level "0". This signal is optional.
17	ALSB	I	TTL Address Input. This signal sets up the LSB of the MPU address.
18	GND	G	Ground Pin
19	VAA	P	Power Supply (+3V)o +5V
20	SCLOCK	I	MPU Port Serial Interface Clock Input
21	SDATA	I/O	MPU Port Serial Data Input/Outpu
22	RSET2	I	A 600 ohm resistor connected from this pin to GND is used to control full-scale amplitudes of the Video Signals from DACs D, E and F (the "small" DACs).
23	COMP2	O	Compensation Pin for DACs d, E and F. Connect a 0.1mF Capacitor from COMP to VAA.
24	DAC F	O	RED/S-Video C/V Analog Output. This DAC is capable of providing 8.66 mA output.
25	DAC E	O	BLUE/S-Video Y/U Analog Output. This DAC is capable of providing 8.66 mA output.
26	GND	G	Ground Pin
27	VAA	P	Power Supply (+3V)o +5V
28	DAC D	O	GREEN/Composite/Y Analog Output. This DAC is capable of providing 8.66 mA output.
29	DAC C	O	RED/S-Video C/V Analog Output. This DAC is capable of providing 34.66 mA output.
30	VAA	P	Power Supply (+3V)o +5V
31	GND	G	Ground Pin
32	VAA	P	Power Supply (+3V)o +5V
33	DAC B	O	BLUE/S-Video Y/U Analog Output. This DAC is capable of providing 34.66 mA output.
34	VAA	P	Power Supply (+3V)o +5V
35	DAC A	O	GREEN/Composite/Y Analog Output. This DAC is capable of providing 34.66 mA output.
36	COMP1	O	Compensation Pin for DACs A, B and C. Connect a 0.1mF Capacitor from COMP to VAA. For Optimum Dynamic Performance in Low Power Mode, the value of the COMP1 capacitor can be lowered to as low as 2.2mF.
37	VREF	I/O	Voltage Reference Input for DACs or Voltage Reference Output (1.235V)
38	RSET1	I	A 150 ohm resistor connected from this pin to GND is used to control full-scale amplitudes of the Video Signals from DACs A, B and C (the "large" DACs).
39	SCRESET/RTC	I	This pin can be configured as an input by setting MR42 and MR41 of Mode Resistor 4. It can be configured as a subcarrier reset pin, in which case a high to low transition on this pin will reset the subcarrier phase to Field 0. Alternatively it may be configured as a Real-Time Control (RTCF) Input.
40	TTXREQ	O	Teletext Data Request input signal used to control teletext data transfer.
41	TTX	O	Teletext Data Input Pin.
42	CLAMP	O	TTL Output Signal to external circuitry to enable clamping of all video signals.
43	PAL_NTSC	I	Input signal to select PAL or NTSC mode of operation, pin set to Logic "1" selects PAL.
44	RESET	I	The input resets the on-chip timing generator and sets the ADV7172KST into default mode. This is NTSC operation, Timing Slave Mode 0, DACs A, B and C powered OFF, DACs D, E and F powered ON, Composite and S-Video out.
45	VSO	O	VSO TTL Output Sync Signal
46	VAA	P	Power Supply (+3V)o +5V
47	GND	G	Ground Pin
48	CLOCK	I	TTL Clock Input. Requires a stable 27 MHz reference clock for standard operation. Alternatively, a 24.52 MHz (NTSC) or 29.5 MHz (PAL) can be used for square pixel operation.

IC TERMINAL DESCRIPTION

PCM1742KE

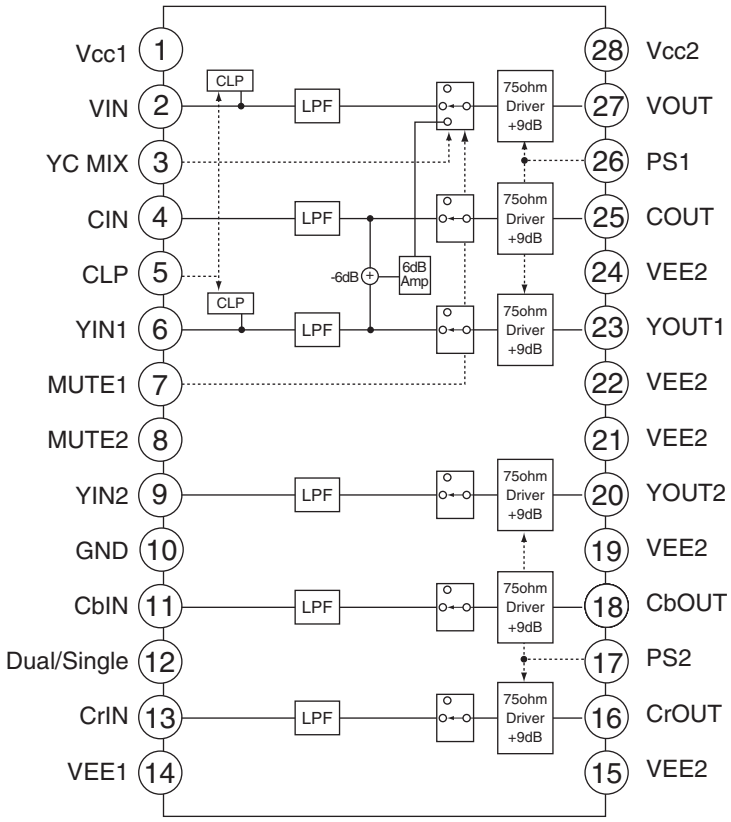
No.	Name	I/O	Pin Function
1	BCK	I	Audio data bit clock input
2	DATA	I	Audio data digital input
3	LRCK	I	L-channel and R-channel Audio data latch enable input
4	DGND	-	Digital ground
5	V_{DD}	-	Digital power supply +3.3V
6	V_{CC}	-	Analog power supply +5V
7	$V_{OUT}L$	O	Analog output for L-channel
8	$V_{OUT}R$	O	Analog output for R-channel
9	AGND	-	Analog ground
10	V_{COM}	-	Common voltage decoupling
11	ZEROR/ZEROA	O	Zero flag output for R-channel / Zero flag output for L/R-channel
12	ZEROL/NA	O	Zero flag output for L-channel / No assign
13	MD	I	Mode control data input
14	MC	I	Mode control clock input
15	ML	I	Mode control latch input
16	SCK	I	System clock input



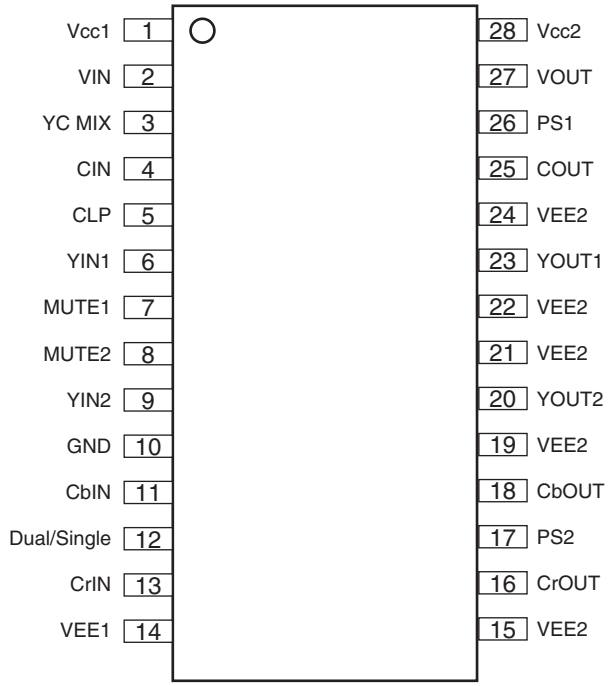
IC BLOCK DIAGRAM

MM1540BFBE (75 ohm x 2 Driver for DVD (6ch / 9dB))

Block diagram



Pin configuration



Switch control table

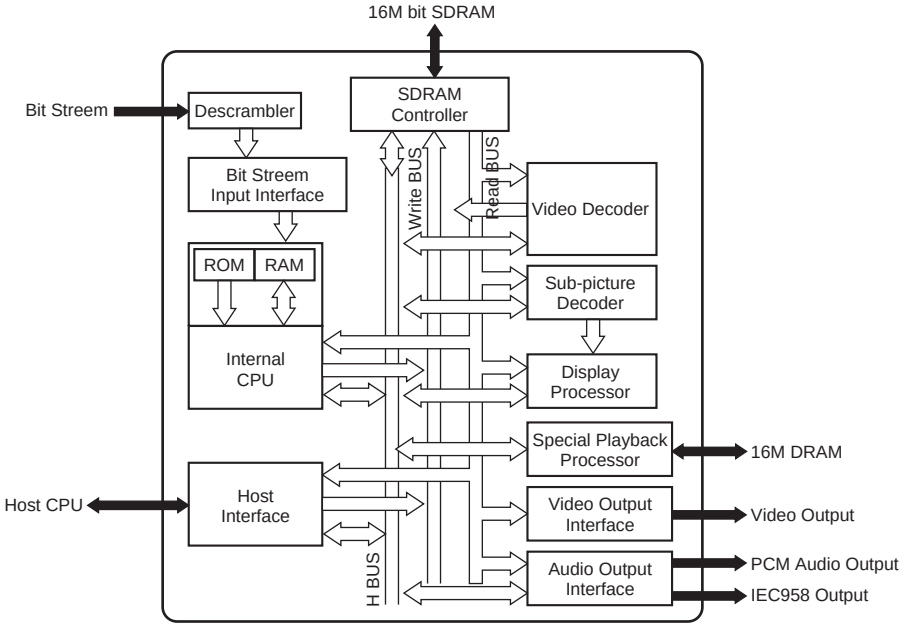
	Control terminal			Select
	YC MIX	MUTE 1	MUTE 2	
VOUT	Low	High	*	VIN
	High	High		YIN + CIN
	*	Low		Mute
	*	High	*	YIN 1
		Low		Mute
	*	High	*	CIN
		Low		Mute
	*	*	High	YIN2
			Low	Mute
	*	*	High	CbIN
			Low	Mute
	*	*	High	CrIN
			Low	Mute

* Don't care

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

M65774BFP (MPED2 Decoder : IC801)

Block Diagram



Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GND	I	Ground	21	5VDD	I	5V power supply
2	HD0	I/O	Data input and output port	22	HD15	I/O	Data input and output port
3	HD1			23	CS	I	Chip select signal input
4	HD2			24	RE	I	Read Enable signal input
5	HD3			25	WE	I	Write Enable signal input
6	HD4			26	BHE	I	Byte High Enable signal input
7	5VDD	I	5V power supply	27	RDY	O	Acknowledge signal whitch is indicated the finish of data reading or writing via the host bus.
8	VDD	I	Power supply	28	INTR	I	Interrupt request signal against to the external CPU from M65773FP
9	HD5	I/O	Data input and output port	29	GND		Ground
10	HD6			30	HA0	I	Address input port
11	HD7			31	HA1		
12	HD8			32	HA2		
13	HD9			33	HA3		
14	GND	I	Ground	34	HA4		
15	HD10	I/O	Data input and output port	35	VDD	I	Power supply
16	HD11			36	5VDD	I	5V power supply
17	HD12			37	HA5	I	Address input port
18	HD13			38	HA6		
19	HD14			39	HA7		
20	VDD	I	Power supply	40	HA8		

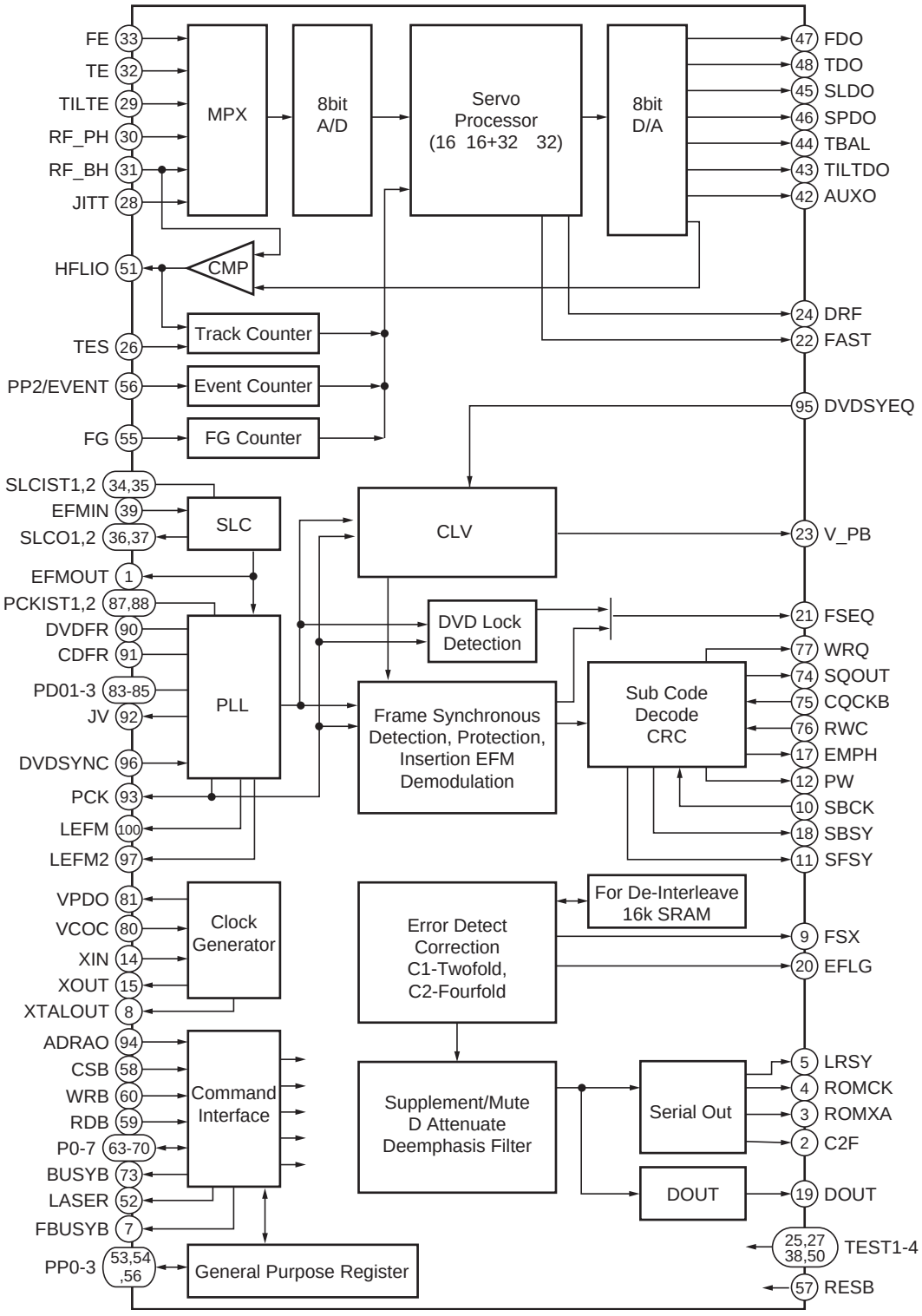
No.	Pin Name	I/O	Pin Function	No	Pin Name	I/O	Pin Function
125	GND	I	Ground	167	MA5	O	Address line with SDRAM
126	NMD6	I/O	Data transfer line Mh DRA	168	GND	I	Ground
127	NMD9			169	MA1	O	Address line with SDRAM
128	NMD7			170	MA6		
129	NMD8			171	MA0		
130	VDD	I	Power supply	172	MA7		
131	NCAS0	O	CAS (Column Address Strobe) control line of DRAM	173	VDD	I	Power supply
132	NWE	O	WE control line of DRAM	174	MA10	O	Address line with SDRAM
133	NCAS1	O	CAS (Column Address Strobe) control line of DRAM	175	MA8		
134	NRAS	O	RAS (Row Address Strobe) control line of DRAM	176	MA11		
135	GND	I	Ground	177	MA9		
136	NMA9	O	Address line with DRAM	178	GND	I	Ground
137	9 MA8			179	DCS	O	Chip select of SDRAM
138	VDD	I	Power supply	180	RAS	O	RAS (Row Address Strobe) control line of SDRAM
139	NMA0	O	Address line with DRAM	181	CAS	O	CAS (Column Address Strobe) control line of SDRAM
140	MA7			182	VDD	I	Power supply
141	NMA1			183	MCLK	O	Operation clock of SDRAM
142	NMA6			184	GND	I	Ground
143	GND	I	Ground	185	DWE	O	WE control line of SDRAM
144	NMA2	O	Address line with DRAM	186	DQMU	O	DQM control line of SDRAM Use for mask of upper byte output.
145	NMA5			187	DQML	O	DQM control line of SDRAM Use for mask of lower byte output.
146	NMA3			188	VDD	I	Power supply
147	NMA4			189	MD7	I/O	Data transfer line with SDRA
148	VDD	I	Power supply	190	MD8		
149	BD7	I	Bit stream input port	191	MD6		
150	BD6			192	MD9		
151	GND	I	Ground	193	GND	I	Ground
152	BD5	I	Bit stream input port	194	MD5	I/O	Data transfer line with SDRA
153	BD4			195	MD10		
154	BD3			196	MD4		
155	BD2			197	MD11		
156	VDD	I	Power supply	198	VDD	I	Power supply
157	GND	I	Ground	199	MD3	I/O	Data transfer line with SDRA
158	BD1	I	Bit stream input port	200	MD12		
159	BD0			201	MD2		
160	BCLK	I	Strobe signal (clock) of BD port	202	MD13		
161	BDEN	I	Indicates the effective or invalid data which is sampled from BD port	203	GND	I	Ground
162	BDREQ	O	Output permission signal against to the device (channel decoder) which connecting to BD port	204	MD1	I/O	Data transfer line with SDRA
163	VDD	I	Power supply	205	MD1		
164	MA3	O	Address line with SDRAM	206	MD0		
165	MA4			207	MD15		
166	MA2			208	VDD	I	Power supply

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
41	HA9	I	Address input port	83	VDD	I	Power supply
42	GND	I	Ground	84	VSYNC	O	Vertical sync. Signal output
43	CDMCK	I	Connect to ground	85	HSYNC	O	Horizontal sync. Signal output
44	CDLRCK	I	L/R clock input from CDDSP	86	PICSTRT		
45	CDBCK	I	PCM bit clock input from CDDSP	87	MBSTRT		
46	CDDATA	I	Digital audio interface input	88	MBDATA		
47	VDD	I	Power supply	89	GND	I	Ground
48	CDDIN	I	PCM audio data input from CDDSP	90	PWD	O	Phase comparator output for external sync. Operation
49	INT2	O	Interrupt request signal against to the external				
50	INT3		CPU from M65773FP	91	CSYNC	I	Composite SYNC signal input
51	DREQ	I	DMA request signal for OSD bitmap transfer	92	OSDKEY	O	OSD key flag output
52	DACK	I	DMA acknowledge signal for OSD bitmap tran.	93	PXCLK	O	Pixel clock (27MHz free-running clock)
53	GND	I	Ground	94	VDD	I	Power supply
54	CLCK	O	27MHz clock output	95	PD7	O	Digital pixel data
55	CLKO	I	System clock output	96	PD6		
56	CLKIN	I	Analog power supply	97	PD5		
57	AVDD1	I	Analog ground	98	PD4		
58	AGND1	I		99	GND	I	Ground
59	AGND3	I	Analog power supply	100	PD3	O	Digital pixel data
60	CCAP	I	Connect to ground	101	PD2		
61	AGND2	I	Analog ground	102	PD1		
62	AVDD"	I	Analog power supply	103	PD0		
63	ACLKO	-	Open	104	VDD	I	Power supply
64	ACLKI	I	Audio clock input	105	GND	I	Ground
65	HMODE1	I	Setting pin of host interface operating mode	106	RESET	I	Hardware reset input
66	GND	I	Ground	107	TEST0	I	Connect to ground normally
67	VDD	I	Power supply	108	TEST1		
68	AOD	O	PCM output of audio data	109	TEST2		
69	AO2			110	VDD	I	Power supply
70	AO1			111	NMD0	I/O	Data transfer line with DRAM
71	AO0			112	NMD15		
72	GND	I	Ground	113	NMD15		
73	DOUT1	O	Digital audio interface output	114	NMD14		
74	DOUT0			115	GND	I	Ground
75	SDA	-	Open	116	NMD2		
76	SCL	-	Open	117	NMD13	I/O	Data transfer line with DRAM
77	VDD	I	Power supply	118	NMD3		
78	GND	I	Ground	119	NMD12		
79	DACCLK	O	Over-sampling operating clock output	120	VDD	I	Power supply
80	DOCLK	O	PCM bit clock output	121	NMD4	I/O	Data transfer line with DRAM
81	LRCLK	O	Clock output for discriminating the channel (L/R)PCM audio data	122	NMD11		
				123	NMD5		
82	HMODE0	I	Setting pin of host interface operating mode	124	NMD10		

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

LC78652W (Servo DSPY : IC201)

Block Diagram



IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

No.	Pin Name	I/O	Pin Function
51	HFLIO	I/O	Mirror detection signal input/output
52	LASER	O	Output pin for laser ON/OFF control
53	PP0/DVD_CDB	I/O	General-purpose port input/output / Disc discrimination signal output
54	PP1/CRCERRB	I/O	General-purpose port input/output / Subcode CRC result signal output
55	FG	I	FG counter input
56	PP2/EVENT	I/O	General-purpose port input/output / Event counter input
57	RESB	I	Reset input
58	CSB	I	Chip select input
59	RDB	I	Internal state reading signal input
60	WRB	I	Command / data writing signal input
61	DVDD2		5V power supply
62	VSS		GND
63	P0	I/O	Command / data input/output
64	P1		
65	P2		
66	P3		
67	P4		
68	P5		
69	P6		
70	P7		
71	VSS		GND
72	DVDD1		3.3V power supply for internal
73	BUSYB	O	Busy signal output of command process
74	SQOUT	O	Serial output of subcode Q
75	CQCKB	I	Shift clock input for subcode Q data output
76	RWC	I	Update permission input of subcode Q
77	WRQ	O	Read out ready monitor of subcode Q
78	AVSS		PLL GND for internal system clock
79	VRPFR		VCO oscillation range setting of PLL for system clock
80	VCOC	I	Connect a PLL filter for system clock
81	VPDO	O	
82	AVDD		PLL 5V power supply for system clock
83	PDO1	I/O	PLL filter connection pin 1 for EFM playback
84	PDO2	I/O	PLL filter connection pin 2 for EFM playback
85	PDO3	I/O	PLL filter connection pin 3 for EFM playback
86	AVSS		PLL GND for EFM playback
87	PCKIST1		Current setting 1 of PLL constant current charge pump for EFM playback
88	PCKIST2		Current setting 2 of PLL constant current charge pump for EFM playback
89	AVDD		PLL 5V power supply for EFM playback
90	DVDFR		VCO oscillation range setting of PLL for EFM playback 1
91	CDFR		VCO oscillation range setting of PLL for EFM playback 2
92	JV	O	Jitter output of PLL clock for EFM playback
93	PCK	O	Bit clock output for EFM playback
94	ADRAO	I	Address input
95	DVDSYEQ	I	DVD synchronize pulse input
96	DVDSYNC	I	DVD synchronous signal input
97	LEFM2	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 2
98	DVDD1		3.3V power supply for I/O
99	VSS		GND
100	LEFM	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 1

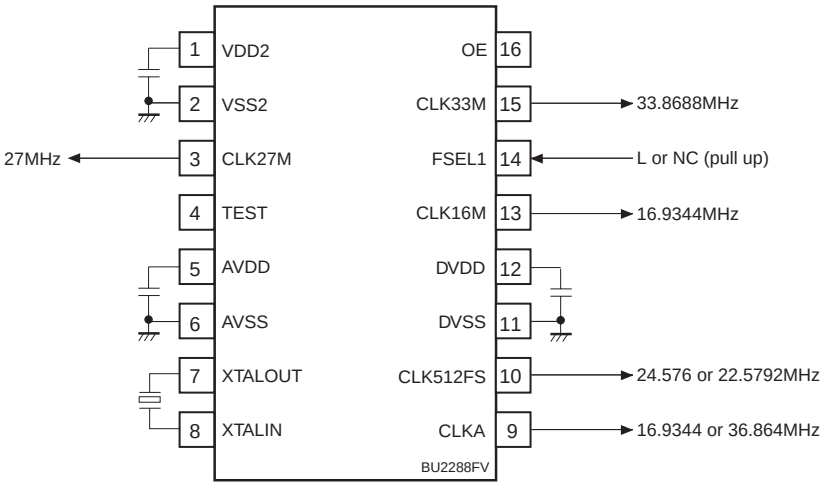
IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

Pin Function

No.	Pin Name	I/O	n Pin Functio
1	EFMOUT	O	Output the state that was binary-stated value EFM
2	C2F	O	C2 flag output
3	ROMXA	O	CD-ROM data output
4	ROMCK	O	Shift clock output for CD-ROM data output
5	LRSY	O	L/R clock output for CD-ROM data output
6	PP3	I/O	General-purpose port input/output / DVD sync. signal input N ch-OD output
7	FBUSYB	O	Busy signal output of DSP process operation N ch-OD output
8	XTALOUT	O	External system clock output
9	FSX	O	CD 1 frame sync. signal output
10	SBCK	I	Subcode reading out clock input
11	SFSY	O	Frame sync. signal output of subcode
12	PW	O	Subcode P, Q, R, S, T, U, V and W output
13	VSS		GND pin
14	XIN	I	Connect a crystal resonator (16.9344MHz)
15	XOUT	O	Connect a crystal resonator
16	DVDD1		3.3V power supply of the oscillation circuit
17	EMPH	O	Monitor pin of the deemphasis
18	SBSY	O	Sync. signal output of the subcode block
19	DOUT	O	Audio EIAJ data output
20	EFLG	O	Error correction state monitor of the error correction C1 and C2
21	FSEQ	O	Detection monitor of the CD/DVD frame sync. signal
22	FAST	O	Playback speed monitor N ch-OD output
23	V_PB	O	Monitor output of the rough servo/CLV control
24	DRF	O	In focus monitor
25	TEST3	I	Test input 3
26	TES	I	Tracking error signal input
27	TEST2	I	Test input 2
28	JITT	I	Jitter quantity detecting signal input of EFM PLL
29	TILTE	I	Tilt error signal input
30	RF_PH	I	RF peak hold signal input
31	RF_BH	I	RF bottom hold signal input
32	TE	I	Tracking error signal inpu
33	FE	I	Focus error signal input
34	SLCIST1		Current setting pin 1 of the constant current charge pump for SLC
35	SLCIST2		Current setting pin 2 of the constant current charge pump for SLC
36	SLCO1	O	Control output 1 for SLC
37	SLCO2	O	Control output 2 for SLC
38	TEST1	I	Test input 1
39	EFMIN	I	EFM/EFM + input
40	AVDD		5V power supply of A/D and D/A for servo
41	AVSS		GND of A/D and D/A for servo
42	AUXO	O	DA auxiliary output
43	TILTDO	O	Tilt control signal output
44	TBAL	O	Tracking balance control signal output
45	SLDO	O	Sled control signal output
46	SPDO	O	Spindle control signal output
47	FDO	O	Focus control signal output
48	TDO	O	Tracking control signal output
49	VREF		Reference level of D/A for servo
50	TEST4	I	Test input 4

IC BLOCK DIAGRAM

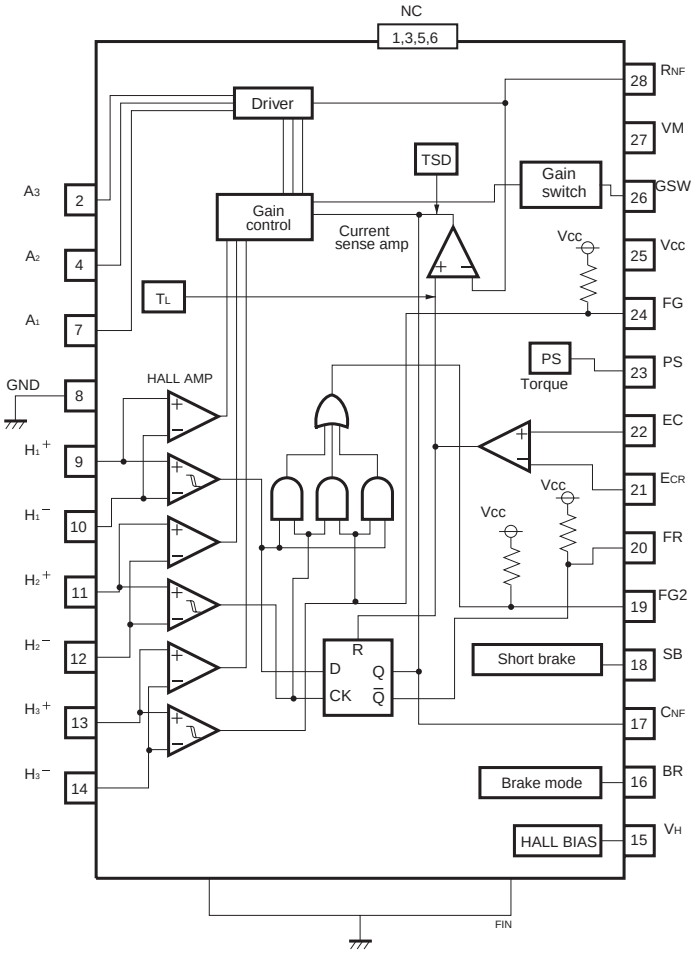
BU2288FV (CLOCK GENERATOR)



IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

BA6664FM (Spindle Motor Driver : IC251)

Block diagram



Pin No.	Pin name	Function	Pin No.	Pin name	Function
1	N.C.	N.C.	16	BR	Select the brake mode pin
2	A_3	Output pin	17	C_{NF}	Connect a capacitor for negative feedback
3	N.C.	N.C.	18	SB	Short brake pin
4	A_2	Output pin	19	FG2	FG3 signal output pin
5	N.C.	N.C.	20	FR	Terminal which detects rotation
6	N.C.	N.C.	21	E_{CR}	Reference control pin of output voltage
7	A_1	Output pin	22	E_C	Output control pin
8	GND	Ground	23	PS	Power save pin
9	H_1^+	Hall signal input pin	24	FG	FG signal output pin
10	H_1^-	Hall signal input pin	25	V_{CC}	Power supply pin
11	H_2^+	Hall signal input pin	26	GSW	Gain select pin
12	H_2^-	Hall signal input pin	27	V_M	Power supply pin (motor)
13	H_3^+	Hall signal input pin	28	R_{NF}	Resistance connection pin
14	H_3^-	Hall signal input pin			for output current detection
15	V_H	Hall bias pin	FIN	FIN	Ground pin

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

PD6345A (Syatem control CPU : IC601)

Pin Function

No.	Mark	Pin Name	I/O	Pin Function
1	P20/D16	D0	I/O	Data bus input/output
2	P21/D17	D1		
3	P22/D18	D2		
4	P23/D19	D3		
5	P24/D20	D4		
6	P25/D21	D5		
7	P26/D22	D6		
8	P27/D23	D7		
9	P30/D24	D8		
10	P31/D25	D9		
11	P32/D26	D10		
12	P33/D27	D11		
13	P34/D28	D12		
14	P35/D29	D13		
15	P36/D30	D14		
16	P37/D31	D15		
17	VSS	GND		Ground
18	P40/A00	A0	O	Address bus output
19	P41/A01	A1		
20	P42/A02	A2		
21	P43/A03	A3		
22	P44/A04	A4		
23	P45/A05	A5		
24	P46/A06	A6		
25	P47/A07	A7		
26	VCC3	V+3.3D		Power supply
27	VCC2	V+2.5D		Power supply
28	P50/A08	A8	O	Address bus output
29	P51/A09	A9		
30	P52/A10	A10		
31	P53/A11	A11		
32	P54/A12	A12		
33	P55/A13	A13		
34	P56/A14	A14		
35	P57/A15	A15		
36	VSS	GND		Ground
37	P60/A16	A16	O	Address bus output
38	P61/A17	A17		
39	P62/A18	A18		
40	P63/A19	A19		
41	P64/A20	A20		
42	P65/A21	TOFSTA	O	Tracking offset injection -A for servo
43	P66/A22	TOFSTC	O	Tracking offset injection -C for servo
44	P67/A23	WBL	O	For Wobble detection corresponding to DVD R/W (main)
45	DAVS	GND		Ground
46	DAVC	V+3.3D		Power supply
47	DA0	STEP1	I	For stepping motor control
48	DA1	STEP2	I	
49	DA2	LODRV	I	Loading, door and select motor drive

No.	Mark	Pin Name	I/O	Pin Function
50	AN0	STEP2	I	For stepper control 2 For offset cancel of D/A output
51	AN1	STEP1	I	For stepper control 1 For offset cancel of D/A output
52	AN2	NAP SW	I	Rear panel H/M/L=M/A/P
53	AN3	XOEM	I	OEM model protection input
54	AN4	LD CUR	I	Input for LD current value indication
55	AN5	SELPOS	I	Tray selector input of microchanger
56	AN6	CLAMP SW		Clamp position SW input
57	AN7	LODPOS	I	Loading clamp position SW input
58	AVCC	V+3.3D		Power supply
59	AVRH	V+3.3D		Power supply
60	AVSS/AVRI	GND		Ground
61	VSS	GND		Ground
62	PP0/ATGX	SLDPOS	I	SW input of slider inside position
63	PP1/FRCK	GSW	O	Gain up at ACBR (at ACBR: H, others: L)
64	PP2/IN0	780ON	I	ON/OFF control signal of 780nm laser diode
65	PP3/IN1	SEDO	O	Tray rotation drive output
66	PP4/IN2	XMON	O	Mute of DRV (spindle motor ON: H)
67	PP5/IN3	XODRVMUT		FTS driver mute output
68	PP6	LT1	O	Communication response to the FL controller
69	PP7	XRDY	I	Communication request from the FL controller
70	VCC3	V+3.3D		Power supply
71	VCC2	V+2.5D		Power supply
72	PO0/OC0	XCURDTI		Actuator current detection input Servo OFF for "L" 300ms
73	PO1/OC1	XCBUSY	I	Busy signal of command process Command acceptable : "L"
74	PO2/OC2	XDSPRST		Servo DSP reset
75	PO3/OC3	BCA		BCA read signal (at BCA read: H) (Not used)
76	PO4/OC4	DSCSNS/ XCD4X	I/O	Disc detection pulse "L": Disc exist Correspond to fourth speed CD playback ("L": Fourth speed)
77	PO5/OC5	PPCNT	O	Switch of TZC in WBL traversal (at PP: H)
78	PO6/OC6	XDFINH	O	Defect signal control (DEFECT ON: Hi-Z; OFF: "L")
79	PO7/OC7	DPD/TE	O	H=1 beam, L=3 beams
80	VSS	GND		Ground
81	PN0/AIN0	DVD/XC	O	RF EQ switching signal at DVD/CD "H": DVD, "L": CD
82	PN1/BIN0	AGOFF	O	"H": Turn off AGC of RFIC
83	PN2/AIN1	650X780	O	780nm/650nm switching signal
84	PN3/BIN1	LD ON	O	ON/OFF control signal of laser diode
85	PN4/AIN2	FOFST2	O	Focus offset adjustment 1 (Tri-value control "H", "L", Hi-Z)
86	PN5/BIN2	FOFST1	O	Focus offset adjustment 2 (Tri-value control "H", "L", Hi-Z)
87	PN6/AIN3	XCD2X	O	For VCD double speed playback
88	PN7/BIN3	OEICG	O	"H": Gain of OEIC up to 6dB
89	PM0/ZIN0	TRYPOS	I	Count input of disc number
90	PM1/ZIN1	N/XP SW	O	Video encoder control port (NTSC/PAL)
91	PM2/ZIN2	V SEL	O	(Composite, S) / (YCbCr) or (RGB) switch
92	PM3/ZIN3	V SEL2	O	(Composite) of skirt terminal / (S) switch
93	PL0/SDA1	SDAI		12C control lines
94	PL1/SDA0	SDAO		
95	PL2/SCL1	SCLI		
96	PL3/SCL0	SCLO		
97	PL4	CTS	I	RS-232C clear to send input
98	PL5	DTR	O	RS-232C clear to send output
99	PL6/UC0	-		
100	VSS	GND		Ground

No.	Mark	Pin Name	I/O	Pin Function
101	PK0/TIN0	XVQERST	0	VQE3 reset signal
102	PK1/TIN1	XCSPR1	0	Serial communication enable of the progressive converter IC
103	PK2/TIN2	XCSVQE5		Serial communication enable of VQE5 IC
104	PK3/TIN3	N.C.		N.C.
105	PK4/TOT0	44X48	O	DAC and DASP supply clock fs 44/48 selection
106	PK5/TOT1	DI ERR	I	DIR reception error (unlock signal) input
107	PK6/TOT2	XMICON2 AOSEL1	O	Mic center MIX signal for multi CH AV-1/audio DSP switch (front L/R data)
108	PK7/TOT3	AOSEL0		AV1 output AOD and AO0 switch
109	VCC3	V+3.3D		Power supply
110	VCC2	V+2.5D		Power supply
111	PJ0/INT0	XINT0	I	
112	PJ1/INT1	XINT1	I	
113	PJ2/INT2	XIRQ10	I	MY chip interrupt #0
114	PJ3/INT3	XIRQ11	I	MY chip interrupt #1
115	PJ4/INT4	XABUSY	I	Busy signal of DSP process operation "L"
116	PJ5/INT5	THLD	I	Playback speed monitoring signal
117	PJ6/INT6	SBSY	I	Sync. signal of subcode block (period SO+SI "H")
118	PJ7/INT7	N.C.	I	N.C.
119	PI0/SI0	SSI	I	Serial bus data input
120	PI1/SO0	SSO	O	Serial bus data output
121	PI2/SCK0	SSCK	I	Serial bus clock input
122	PI3/SI1	RXD	I	RS-232C RXD
123	PI4/SO1	TXD	O	RS-232C TXD
124	PI5/SCK1	SELMOD		Audio DSP mode switch
125	PH0/SI2	RESET2		Reset for DSP 2
126	PH1/SO2	XOSADSP1		CS for DSP 2
127	PH2/SCK2	XCSSPD		Latch signal of serial/parallel IC for generating audio DSP control signal
128	MD0	GND		Ground
129	MD1	GND		
130	MD2	GND		
131	VSS	GND		Ground
132	VCC2	V+2.5D		Power supply
133	VSS	GND		Ground
134	X1	EXTAL	O	
135	X0	XTAL	I	
136	VCC3	V+3.3D		Power supply
137	PC0/DREQ2	LFEON RESET1	O	Select Mix to front L/R of LFE element DSP 1 reset
138	PC1/DACK2	XMICON1 AV1/XSDSP	O	Mic front L/R MIX signal for 2 ch AV-1/servo DSP switch
139	PC2/DEOP2	6CHMD	O	DAC output 2ch/6 ch switch (XDVRST2)
140	PB0/DREQ0	XDREQ0	I	DMA response output to BY Chip
141	PB1/DACK0	DACK0	O	DMA request input from BY Chip
142	PB2/DEOP0	N.C.		N.C.
143	PB3/DREQ1	XDREQ1	I	DMA response output to AV-1 Chip
144	PB4/DACK1	XDACK1	O	DMA request input from AV-1 Chip
145	PB5/DEOP1	XOXCKE	O	ON/OFF switch of DSP external clock
146	PB6/IOWRX	DOISEL1	O	Digital output switch 1 of audio DSP (AV-1. DSP and GND)
147	PB7/IORDX	DOISEL2	O	Digital output switch 2 of audio DSP (AV-1. DSP and GND)
148	VSS	GND		Ground
149	PA0/CSOX	XCS20	O	Chip select output to Flash ROM
150	PA1/CS1X	XCS6	O	AV-1 Chip select

No.	Mark	Pin Name	I/O	Pin Function
151	PA2/CS2X	XCS3	O	Chip select of PD4995A (MY Chip)
152	PA3/CS3X	XCS4	O	Chip select of servo DSP
153	PA4/CS4X	XCS23	O	Chip select output to SRAM (1M)
154	PA5/CS5X	N.C.	O	N.C.
155	PA6/CS6X	N.C.	O	N.C.
156	PA7/CS7X	N.C.	O	N.C.
157	VCC3	V+3.3D		Power supply
158	VCC2	V+2.5D		Power supply
159	NMIX			V+3.3D fixed
160	HSTX			V+2.5D fixed
161	INITX	XINIT	I	
162	P80/RDY	RDY	I	
163	P81/BGRNTX	XAMUTE	I	Final stage mute of 2 ch audio output
164	P82/BRQ	XMMUTE	O	Audio multi channel mute
165	P83/RDX	XRD	O	
166	P84/WR0X	XWR0	O	
167	P85/WR1X	XWR1	O	
168	VSS	GND		Ground
169	P90/SYSCLK	SYSCLK	O	
170	P91	DFRST		DAC reset (for front L/R)
171	P92/MCLK	DFRST1		DAC reset (for center, surround and LFE)
172	P93	XCSDF0	O	DAC chip select (XLAT3)
173	P94/LBAX	XCSDF1	O	DAC chip select for center, surround and LFE
174	P95/BAAX	XAQRST	O	AQE reset
175	P96	XCSAQE	O	AQE chip select
176	P97/WEX	TM ENT	I	Test mode entry

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